

# Soft wheat cultivated in Nord-Pas-de-Calais from 1800 to 1930

The evolution of agricultural practices and genetic selection

Work carried out by Yoanne Scottez and Thibault Debaillieul Fall 2014 An ADEARNCRRG Collaboration













#### **Summary**

#### I/ Context

A - France in the 19th century

Introduction

France-England relationship

The impact of the industrial revolution on the countryside

The beginning of economic liberalism

**B- NordPasdeCalais and its agriculture** 

**Crop rotations** 

**Cereal cultivation** 

The discovery of chemical fertilizers

**Conclusion** 

C – What bread did people eat at that time?

The bread

The place of bread in French society

A diet that diversifies

The mill

#### II/ Varieties cultivated in the region

A/ Country wheat

**Characteristics of northern wheat** 

Selection methods and specific practices

**B/ English wheat** 

**Early selection work** 

**Variety Descriptions** 

**C/** Aquitaine wheat

**D/ Conclusion** 

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A/History of the selection

The selection of seed producers

The discovery of genetics

First generation of selected varieties

Second generation from a more precise selection

A regulated selection

B/ The Pévèle selectors

C/ Description of varieties

## IV/ Conservation of wheat genetic resources in France

A/ The INRA network

B/ The National Botanical Conservatory of Bailleul (CBNBI)

C/ The Peasant Seed Network

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#### Warning



#### **A - France in 1800**

Introduction

The impact of the revolution industrial in the

campaigns

#### France-England relationship



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The beginning of economic liberalism

#### **B- NordPasdeCalais and its agriculture**

**Crop rotations** 

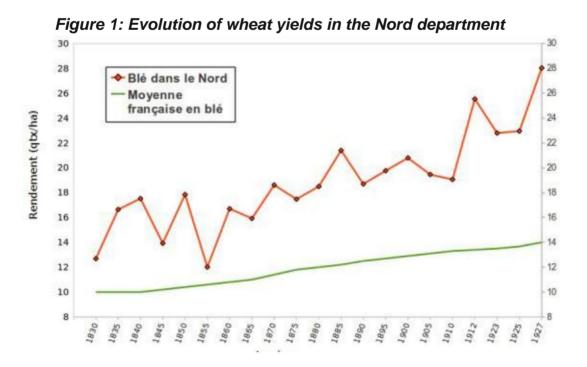
7/32

	Disparités ré d'après les	1852 gionales en rende Statistiques agrico	ment en grain oles du Nord		
Туре	Fort rendement (>26 qtx/ha)	Rendement moye	n (env. 20 qtx/ha)	Faible rendement (<14 qtx/ha	
Valencie		Cambrai	Avesnes	Boulogne	
	Valenciennes	Douai	Arras	***************************************	
Grain		Dunkerque	Béthune	Montreuil	
	Lille	Hazebrouck	Lille	St Pol	
	Lille	St O	mer		

2

#### **Cereal cultivation**

Agricultural modernization and increase in wheat acreage



8/32

The abandonment of meslin

19

20

### The discovery of chemical fertilizers

3



## C – What bread did people eat at that time?

The cereals used



Advertisement for a fertilizer, 19th century

An evolution in the type of flour, brown bread, white bread?

#### Conclusion

The ferment

#### A diet that diversifies

5

The place of bread in French society

6

#### The mill

Improved flour extraction

of the

techniques



**Emergence of standards on flour quality** 

10

11

Figure 2: Evolution of the quality criterion on baking strength from 1920 to 2013

Year	19201940	19401950	19601970	19701980	19801990	19901997	2011	2013 (bio)	
W	60 to 80	80 to 100	100 to 110	110 to 130	140 to 170	180 to 200	170 to 300	W > 130	-

### II/ Varieties cultivated in the region

#### A/ Country wheat

Southampton Siegerlander Chiddams Belgie Blanc de flandres i que Frankfurt am Main Roseau de Bergues IIII Wiesbaden Würzb re Havre Rouen Luxembourg Chicot blanc Brest Mouton a épi rouge Perle du Nuisement Printemps du Finistère Rouge d'Altkirch Guimper Bordeaux 100 km 200 km **OMontauban** Toulouse Blé de Pays ssonne Montpellier Marseille Blé Anglais **ODonostia** oNarbonne Blé Allemand Pamplona Andorra

Figure 3: Origin of local wheat grown in northern France from 1800 to 1920

A descriptive sheet has been produced for each of these wheats in Appendix 3.

#### **Characteristics of northern wheat**



White of Flanders (2013)

16

#### **Selection and multiplication methods**

18

2

#### **B/ English wheat**

#### **Early selection work**

21

**Variety Descriptions** 



Figure 4: Geographical origin of English wheat varieties cultivated in Nord-Pas-de-Calais from 1800 to 1926

Evolution of yields by country from 1865 to 2003, we see that English wheats have a yield always higher by about 10 qtx than the French national averages. The reputation of these wheats being well known in the breeding circles, it influenced the choice of parents for the crosses made by the seed houses.



Evolution de la culture du blé en Angleterre, France, Italie et Espagne de 1863 à 2003

#### **C/** Aquitaine wheat

**D/ Conclusion** 

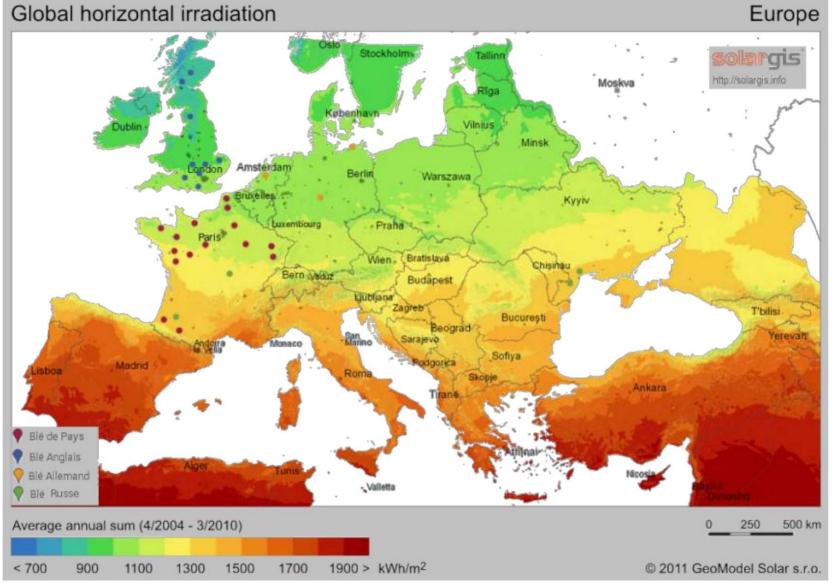


Figure 5: Distribution of the geographical origin of wheat according to the radiation perceived on the ground in Europe.

This map shows the location of the places of origin of the varieties of wheat cultivated in Nord-Pas-de-Calais from 1800 to 1926. The gradation of colors from blue to red indicates the increase in solar energy.

perceived.
It is
understandable that
to adapt
Aquitaine wheat
to northern
latitudes, it was
necessary to cross
it with English wheat,
particularly for
reasons of

precocity.

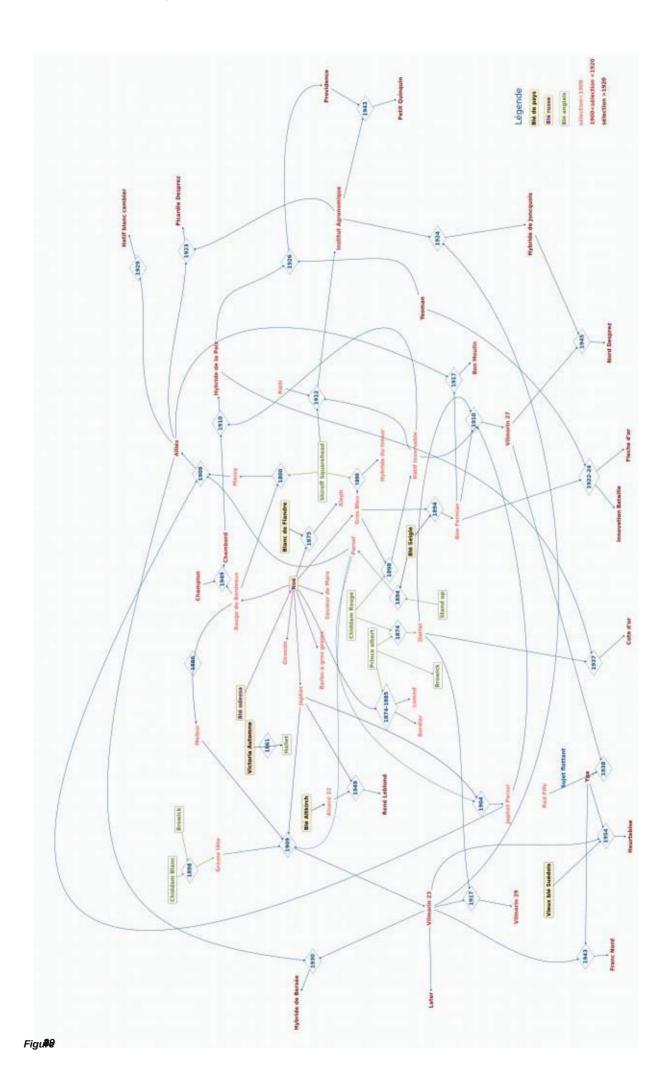
#### **III/** The first crossings

A/History of the selection

The selection of seed producers

First generation of selected varieties

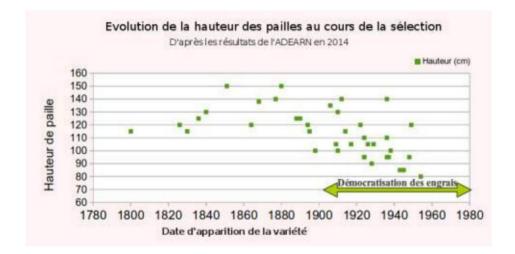
The discovery of genetics



## Second generation from a more precise selection

#### A regulated selection

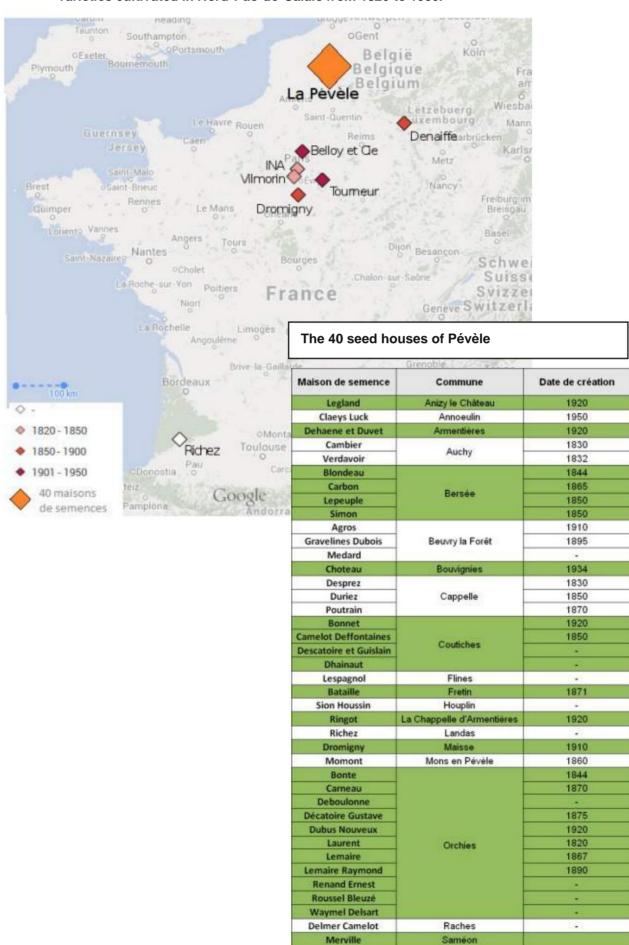
22



#### B/ The Pévèle selectors

23

Figure 7: Geographic distribution of the breeding houses at the origin of the wheat varieties cultivated in Nord-Pas-de-Calais from 1820 to 1950.



#### **C/ Description of varieties**

## IV/ Conservation of wheat genetic resources in France

A/ The INRA network

## B/ The National Botanical Conservatory of Bailleul (CBNBI)

C/ The Peasant Seed Network

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#### **Summary of Annexes**

Appendix 1: European map of the origin of wheat in Europe Free access on this link: https://

drive.google.com/open?id=1Tf Ss02SRcklbjfRAvKilzPutS8&usp=sharing

Appendix 2: Partial representation of the genealogy of wheat cultivated in Nord-Pas-de -Calais between 1800 and 1926.

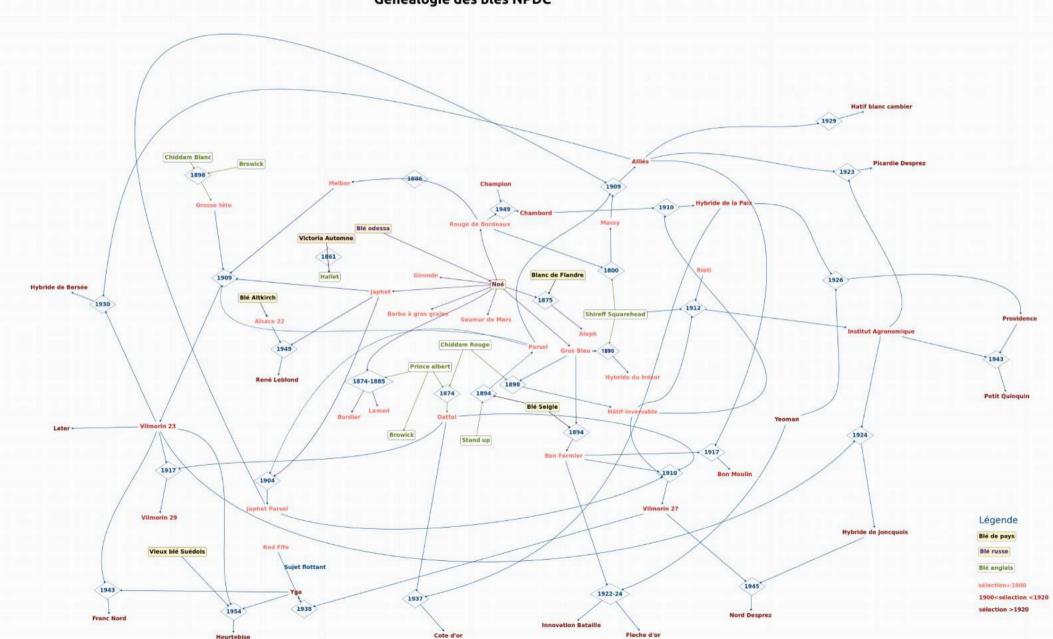
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#### **COUNTRY WHEAT:**

White Flanders	p. I Rye
wheat	p. II Bearded
champagne	p. III White
chicot	p. IV
Roughcast	p. V Frank
wheat	p. VI Red ear
sheep	p.VII Pearl of
Nuisement	p.VIII Australian
chicken	p. IX Bergues
reed	p. X Alsace
red	p. XI StLaud
red	p. XII Autumn
Saumur	p. XIII
ENGLISH WHEAT:	
Browick	p. XIV Autumn Chiddam
with white spike	p. XV Autumn Chiddam with red
ear p. XVI	
Goldendrop	p. XVII Prince
Albert	p. XVIII Shireff
Squarehead	p. XIX
Teverson	p. XX
AQUITAINE WHEAT:	
Noah	p. XXI Odessa without
beards	. p. XXII Bordeaux
red	p. XXIII
SELECTED WHEAT VARIETIES	
Allies	p. XXIV Good
farmer	p. XXV Good
mill	

Change	p. XXVIII
Chanteclair	p. XXIX
Dattel	p. XXX Golden
Arrow	p. XXXI
Gerbor	p. XXXII Big
Blue	p. XXXIII Early
Wattines	p.XXXIV Early
Reversible	p. XXXV
Heurtebise	p. XXXVI Hybrid
40	p. XXXVII Hybrid of
Peace	p. XXXVIII Hybrid of
Treasure	p. XXXIX Innovation
Battle	p. XL Agronomic
Institute	p. XLI
Japhet	p. XLII
Later	p. XLIII Petit
quinquin	p. XLIV Picardie
Desprez	p. XLV Preparer
Etienne	p. XLVI
Providence	p. XLVII René
Leblond	p. XLVIII Vilmorin
23	p. XLIX Vilmorin
27	p. L Vilmorin
29	p. LI Wilson
Jaune	p. LII
Yga	p. LIII

#### Généalogie des blés NPDC





#### WHITE OF FLANDERS

Syn. Bergues wheat; white-zea; white wheat; Armentières wheat; Swiss wheat

Type Blé de Pays

	Variété fille
Date d'obtention	1875
Nom	Aleph
Obtenteur	Vilmorin
Issue de	Blanc de Flandres x Noé

This emblematic variety of the region was already known in the 18th century in the North of France. It is also called Armentières wheat, because a large part of the farmers of the North bought their seeds from farmers of Armentières specialized in the multiplication of local wheat.

White Flanders wheat is very productive, it gives a beautiful white grain of very good baking quality, with very beautiful and abundant straw. It is a wheat giving good yields, but the sowing must not be too dense because it is sensitive to lodging despite its strong straw. It is late or semi-late, well adapted to the very temperate and maritime climate of its country of origin, as well as in the west of France.

Although it was very popular, it was only used by breeders to create one variety: Aleph wheat. The latter had many drawbacks, and Vilmorin, its breeder, abandoned it after 4 years. In 1930, its grain was still sought after by milling.

Morphological description (Vilmorin, 1880)

White spike , slightly more compact at the top, semi-compact.

**STRAW** 

Hollow, high, good quality

**GRAIN** 

white, medium, cylindrical

Agronomic characteristics

Alternativity: Winter Earliness: Semi-late

Tillage: Strong Cold tolerance: Good

Straw height: > 1.5m Diseases:

susceptible to rust Verse: sensitive

Bakery value

Very good baking quality

1



Priority: 17161

Liger, The new rustic house or general economy of all country goods, 1716



#### WHEAT-RYE

Priority: 18492

Country wheat type

wheat type	Variétés filles
Date d'obtention	1894
Nom	Parsel
Obtenteur	Vilmorin
Issue de	Blé-seigle x carter à paille raide
Nom	Bon fermier
Obtenteur	Vilmorin
Issue de	Blé-seigle x Gros bleu

Rye wheat actually has the property of succeeding in extremely light soils that one might think were only suitable for growing rye. It would seem that this variety requires less limestone than most other wheats: it is true that it does not tiller much and never gives an extremely full harvest, however it is productive in straw and grain, and provided that the land where it is grown is not completely bad, the quality of the grain is remarkably good. Rye wheat can be sown quite late in the fall; it also succeeds perfectly after winter and can be considered a true spring wheat.

#### Morphological description (Vilmorin, 1880) **EAR**

Long, reddish-brown spike, slightly hairy on the glumes, very tapered and thin, almost always curved.

#### **GRAIN**

Yellow grain, elongated, quite thin, often very beautiful and very full.

WHITE

STRAW, very high and at the same time flexible and strong

Agronomic characteristics

Alternativity: winter
Earliness: Semi-early
Tillering: Medium
Cold Tolerance: Fair
Straw height: High
Diseases: Verse: sensitive

Bakery value:

Not specified



<sup>2</sup> Agricultural Society, Sciences and Arts of Valenciennes, Agricultural, industrial and literary review of the North, 1849, p224



#### **CHAMPAGNE BEARDED**

**Syn** Champagne bearded ordinary, Blanc de Champagne Country wheat *type* 

Priority: 18703

It was very widespread in the Troyes region and in Champagne in 1870. It is grown on calcareous soils in a harsh climate. This wheat does not give very high yields and does not grow in very fertile soils. One of its greatest qualities is its resistance to cold.

Unfortunately, like many bearded wheats, it was abandoned at the beginning of the 20th century.

White COB
quite long
STRAW
white, thin and hollow
Low
GRAIN
red, big and long
Agronomic characteristics
Alternativity: winter
Earliness: Late
Tillering: Good
Straw height: medium
Verse: Quite sensitive

Morphological description (Denaiffe, 1909)



Illustration of the ear by Denaiffe, 1909

Bakery value
Not specified

<sup>3</sup> Denaiffe & Sirodot, Wheat cultivated using new methods, 1909, p78

Country wheat



## WHITE CHICOT

Priority: 18584

Syn Chicot without beard Country Wheat Type

Mainly cultivated in the Caen plain. The size of the ears varies depending on the quality of the soil. v and Normandy, local wheat quickly o

In Brittany and Normandy, local wheat quickly gave way to improved wheat because the climate was suitable to growing it.
Morphological description (Jonard, 1936)
EAR
white
STRAW
hollow
GRAIN
red, big and short
Agronomic characteristics:
Alternativity: winter
Precocity: -
Tilling: -
Straw height: -
Verse: -
Bakery value
Produces lower quality bread

<sup>4</sup> Isidore, Comparative studies on the cultivation of cereals, fodder plants and industrial plants, 1859



### **PLASTERING**

Priority: before 15005

**Syn** Crépy Wheat Country Wheat **Type** 

Crépi wheat is one of the oldest French varieties. It has been cultivated since time immemorial throughout the North of France and part of Champagne. The grain was sold at the very famous market of Crépy en Valois. This region with its relatively harsh climate made it robust and rustic.

It was all the more successful in more sheltered lands. Its hardiness allowed it to survive English wheats that could not withstand very cold winters. Good and medium-strong soils are suitable for it. If they contain limestone, the grain is all the more beautiful and heavier.

Morphological description (Vilmorin, 1880) White spike in

dry years, yellow in wet years.

### **STRAW**

white, tall and thin

### **GRAIN**

pale red, elongated, slightly glazed or horny, but full and of very good quality

Agronomic characteristics

Alternativity: winter Earliness: semi-early

Tillering: strong Verse: resistant

Bakery value not

provided





Ear and grains, 2014

<sup>5</sup> Journal of Practical Agriculture, 1905, Volume 2, p429

Country wheat



## **FRANC BLÉ**

Priority: 18586

**Syn** Franc ordinary wheat Country Wheat **Type** 

Wheat from Normandy. It was cultivated in the Caen plain. Very little information has been found. No precise description is currently known for this variety, it is simply cited.

In Brittany and Normandy, local wheat quickly gave way to improved wheat because the climate was suitable for growing it.

Morphological description
Not specified
Agronomic characteristics
Not specified
Bakery value
Produces lower quality bread

<sup>6</sup> Isidore, Comparative studies on the cultivation of cereals, fodder plants and industrial plants, 1859





# **RED-EARED SHEEP**

Priority: 19367

_			
Count	+r\ / \ \ /	haat	tı/na
Cour	LIV VV	ιıσαι	LVNG

Wheat from the Eastern region of France. This wheat is known for its high resistance to cold. Very little bibliographic data has been found for this variety. It has rarely left its original basin.

Morphological description (Jonard, 1936)
Fawn-
colored, loose, medium-sized <b>spike</b>
STRAW
variable size, half full
GRAIN
red, quite large and oblong
Agronomic characteristics
Alternativity: -
Precocity: -
Tilling: -
Straw height: -
Verse: -
Diseases : -
Bakery value
Very good baking value

<sup>7</sup> Jonard, Essay on the classification of soft wheat, volume 3, 1936, p201



## **PEARL OF HARM**

Priority: 18748

**Syn** Pearl of Nuisance, Pearl Nuisance Country Wheat **Type** 

This variety was discovered on Mr. Hermand's Nuisement farm, near Chartres. This wheat has always produced higher yields in the experiments conducted by Vilmorin. It is a productive variety, tillering well, extremely resistant to cold and valuable for warm and light soils. Unfortunately, like all bearded wheats, it tended to be abandoned.

Recommended for warm and light soils.

This wheat does not appear to have been used in crossbreeding.

Morphological description (Denaiffe, 1909) EPIC

Red bearded, big, elongated

#### **STRAW**

white, quite strong, does not pour

### **GRAIN**

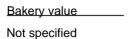
White, short and swollen

Agronomic characteristics

Alternativity: winter Earliness: semi-late Verse: resistant

Tillering: strong

Diseases: very resistant to rust







## **AUSTRALIAN CHICKEN**

Priority: 18309

**Syn** Blue Poulard, mouse gray wheat Country Wheat **Type** 

This European wheat went to Australia and then returned to Europe and took its name of Poulard d'Australie. Its cultivation was very widespread in England during the 19th century and it was really common in the cultures of the North of France from 1870.

The Australian poulard is recommended for several qualities: it is rustic and adapts well to tough, cold and even humid clays; it tillers a lot and gives straw and grain of high quality. It is much closer to soft wheat than that of any other poulard. It should be sown in October or at the beginning of November, a little clear, because it tillers a lot.

It was the only poulard wheat grown in Nord-Pas-de-Calais and quite rarely. It produced good flour and good yields.

Morphological description (Vilmorin, 1880) COB

square, tapering from the base, hairy and more or less dark gray

### **STRAW**

full, high, strong, quite thin

#### **GRAIN**

yellow or reddish, quite elongated, very full, barely humped.

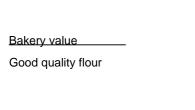
Agronomic characteristics

Alternativity: winter

Earliness: early

Tillage: Strong Verse: resistant

Diseases: -



<sup>9</sup> Denaiffe & Sirodot, Wheat cultivated using a new method, p88



# **BERGUES REED**

**Syn** Wheat Reed Country wheat **type** 

Priority: 186710

Reed wheat was communicated by Mr. Louis Pilat, from Brebières (Pas-de-Calais), who cultivated it for many years and obtained extraordinary yields. It has already produced more than 50 hectoliters per hectare, which was unusual at the end of the 19th century. Reed wheat takes its name from the firmness and strength of its stem. It is particularly suitable for very rich soils, but gives very good yields in medium clay soils with calcareous subsoil, provided that they are not too dry.

This variety was long held in high esteem in the region. It was still very popular in 1910, but it would not have produced any daughter varieties.

Morphological description (Vilmorin, 1880)

White COB

### **STRAW**

Very stiff straight straw

### **GRAIN**

white, large, well swollen, rather obtuse at both ends

Agronomic characteristics:

Alternativity: winter

Precocity: Quite early

Tillering: Good

Straw height: medium Verse: Resistant



<sup>10</sup> Denaiffe & Sirodot, Wheat cultivated using new methods, 1909, p36



## **ALSACE RED**

**Syn** Rouge d'Altkirch Country Wheat **Type**  Priority: 188011

		Variétés filles					
Date d'obtention	1893	1903	1930	1935	1936	1938	1949
Nom	Alsace 22	B2	Président Tardieu	Vieux ferrette	Japhet Alsace	Evolution	René Leblond
Obtenteur	Station Colmar	Schribaux	Leblond	Station Colmar	Benoist	Tourneur	Leblond
Issue de	Sélection dans Rouge d'Alsace	Rouge d'Alsace x Rouge de Bordeaux	Rouge d'Alsace x Japhet	Sélection dans Rouge d'Alsace	Rouge d'Alsace x Japhet	Rouge d'Alsace x C Tourneur	Rouge d'Alsace x Japhe

Variety originating from Alsace, cited in 1896 as winter wheat with good adaptation to cold.

Great hardiness, well adapted to cold and mountainous regions. It makes a flour rich in gluten. Although it is contraindicated to cultivate it outside of Lorraine and Champagne, the farmers of Calais appreciated it on rich soils.

Morphological description (Jonard, 1936) Red,

coppery, very tapered spike

### **STRAW**

+/- high, reaches 130cm

### **GRAIN**

red

Agronomic characteristics

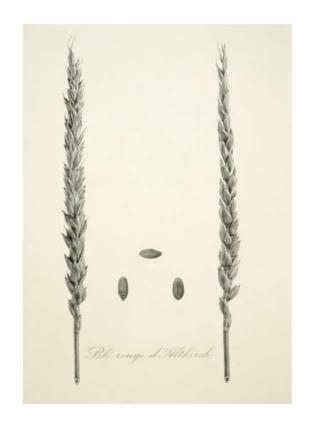
Alternativity: Half-winter

Precocity: semi-early Tillering: medium Verse: resistant

Diseases: susceptible to yellow and black rust

Bakery value

Very good quality, flour rich in gluten



<sup>11</sup> Vilmorin, The best wheats, 1909, p36



# **RED ST LAUD**

Priority: 188012

Syn Wheat from St-Laud Country Wheat Type

Wheat known for a very long time in the Loire Valley. It is particularly suited to rich valley soils, where other wheats would fall. It holds as firmly as reeds and produces good yields. It prefers the climate of the west or center to that of the east.

Morphological description (Vilmorin, 1880)

**EPI** 

big red spike

#### **GRAIN**

Large grain, red and semi-glossy

### **STRAW**

stiff big and short

Agronomic characteristics

Alternativity: alternative

Earliness: early Tillering: Low

Cold tolerance: quite sensitive Diseases: susceptible to rust

Verse: resistant

Bakery value

The grain is rich in gluten Makes a nice white flour





## **AUTUMN SAUMUR**

**Syn** Gris de St-Laud Country wheat **type** 

Priority: 180013

Cultivated since time immemorial from Saumur to Angers, this wheat spread to the North of France from 1800.

At the end of the 19th century, it was found in crops mixed with Noah's wheat which gradually replaced it.

The soils that suit it are rich and well-drained alluvial soils. It also succeeds on good loam or strong, calcareous soils where it gives fairly good yields.

Although it is resistant to lodging, it can lie down in very rich soils.

Morphological description (Vilmorin, 1880)

**EPI** 

large, square

RED

**GRAIN**, large and long, often semi-glazed

### **STRAW**

medium to fairly tall, strong and straight

Agronomic characteristics

Alternativity: winter Earliness: semi-early

Tilling:

Cold tolerance: Quite sensitive

Diseases: Resists rust

Verse: resistant

Bakery value

Not specified





### **BROWICK**

Browick Square Spike *Syn Type*Pure Line Variety *Genealogy*Selection in Prince Albert *Breeder* Mr. Browick

Priority: 184414

	Variétés filles				
Date d'obtention	1896	<1924	<1932		
Nom	Vilmorin 27	Yeoman	Winterweizen		
Obtenteur	Vilmorin	Biffen	(blé suisse)		
Issue de	Browick x Chiddam d'automne à épi blanc	Browick x Red Fife	Browick x Grosse tête		
Nom	Briquet jaune				
Obtenteur	Vilmorin	_	_		
Issue de	Browick x Chiddam d'automne à épi blanc				

This wheat was selected in a field in Prince Albert by Mr. Browick, in Norfolk. It spread rapidly in England and arrived in France around 1865.

Browick is similar to its parent but smaller, both in terms of straw and ear. It is necessary to select it regularly, because it tends to stretch and take on the appearance of Prince Albert. It is a wheat that produces a lot on good land.

Morphological description (Vilmorin, 1880) COB

dull red

compact, club-shaped

GRAIN

Red, large, a little angular

STRAW

High and steep

Agronomic characteristics

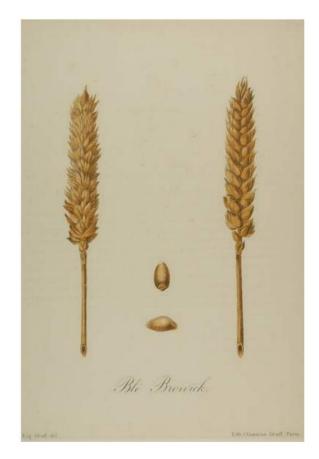
Alternativity: Winter Earliness: semi-late

Tillering: medium Verse: Resistant

Diseases: slightly susceptible to rust

Bakery value

Makes a flour very low in gluten (less than 8%)



14

Percival, Wheat in Great Britain, 1933, p110



### **AUTUMN CHIDDAM WITH WHITE SPIKE**

**Syn** Chiddam Autumn White **Type** English wheat

**Genealogy** Selection in a wheat population

Variétés filles						
Date d'obtention <1880 1898						
Nom	Cambridge	Grosse tête				
Obtenteur	-	-				
Issue de	sélection dans Chiddam d'automne blanc	Chiddam d'automne blanc x Browick				

Chiddam wheat refers to a series of varieties of English wheat, from the County of Sussex, around the village of Chidham. 3 varieties are naturalized in France: white autumn chiddam, a spring Chiddam and a red-eared autumn Chiddam. It was first widespread in Normandy, on the average lands of the West. In very fertile soils, the weight of the ears can sometimes lead to lodging. Highly esteemed at the beginning of the 20th century, it was cultivated in France and Belgium. It is a late wheat, very productive. Although our Norman friends cultivate it on average lands in order to avoid lodging, this wheat was cultivated in fertile lands north of Paris without suffering from lodging.

It was given a very good baking quality at the end of the 19th century, which was contested during current analyses.

Morphological description (Vilmorin, 1880) COB

almost square, but nevertheless wider on the face than on the profile

#### **STRAW**

white, quite thin and strong Height below average

GRAIN

white, swollen, short and rounded

Agronomic characteristics (vilmorin 1880)

Alternativity: winter

Earliness: semi-early

Tillering: strong

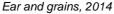
Pouring: good resistance

Diseases: -

Bakery value

Low gluten content







Priority: 184015

<sup>15</sup> Denaiffe & Sirodot, Wheat cultivated using new methods, p46



## **RED SPIKED AUTUMN CHIDDAM**

**Syn** Chiddam Autumn Red **Type** English wheat **Genealogy** selection in a wheat population

	Girl varieties			
Date of obtaining	1874	1890	1898	
Name	Date	Champlan	Hasty reversible	
Breeder	Vilmorin	Vilmorin	Vilmorin	
Issue of	Red Autumn Chiddam x Prince Alber	Red Autumn Chiddam x Prince Albert	Early reversible x Red autumn chiddam x Big blue	

Chiddams wheat refers to a series of varieties of English wheat, from the County of Sussex, with surroundings of the village of Chidham. 3 varieties are naturalized in France: white autumn chiddam, a spring Chiddam and a red-eared autumn Chiddam. The red-eared autumn variety is particularly widespread in Brie where it gives excellent results. It is also very widespread in the North of France and will remain cultivated in the North until 1950. Its straw is more short which makes it resistant to lodging despite a heavy ear of large, beautiful grains. Wheat

Red-spiked autumn chiddam likes strong, rich soils

limestone.

Morphological description (Vilmorin, 1880)

**EAR** 

dark red or brown, slightly flattened Slightly curved

### **STRAW**

white, straight, firm, fairly thin, medium sized

### **GRAIN**

White grain, rounded, short, very full

Agronomic characteristics

Alternativity: winter Earliness: semi-early Tillering: Medium Verse: resistant

Diseases: generally resistant to brown rust

Bakery value

Low gluten content but bread-making





Priority: 186416



Ear and grains, 2014



Breeder unknown

### **GOLDENDROP**

**Syn** Golden Drop, Scottish Red, Blood red, Red Goldendrop, Gold drop, Goldendrop long, Littleton **Type** English wheat

Date of birth: 1836

	Variété fille
Date d'obtention	1943
Nom	Bretagne
Obtenteur	Desprez
Issue de	Goldendrop x Institut

This Scottish wheat would have come from the London grain market. Its hardiness, its large Its yield and resistance to lodging make it one of the most valuable varieties for countries with a rigorous. Along with Hunter wheat, Scottish red is the one of all foreign wheats that can withstand the greater cold. Only Crépi wheat is superior to them in this respect. Another quality valuable feature of Scottish red wheat is its great resistance to lodging. Except in the lands extremely rich and fresh, it almost never lets itself be blown away by wind or rain. It has replaced the Date in wetlands and on the edge of forests.

This wheat should be sown early in the fall, in October or before the end of November. During In winter, it is easily distinguished from other wheats by the finesse of its foliage which is green grayish, very light. This variety is well suited to medium or strong soils in central France, especially in the slightly mountainous parts in granite or schistose terrain. However, where the lime is lacking in the soil, it requires calcareous amendments.

It remained very popular in Nord-Pas-de-Calais. It remained cultivated until the 1950s.

Morphological description (Vilmorin, 1880)

### EAR

Redhead.

Quite long, little or no awning,

#### STRAW.

High and hollow, very often colored, purplish, grayish.

### **GRAIN**

Red, medium, quite short, slightly hunchbacked.

Agronomic characteristics

Alternativity: winter Earliness: Late

Tillering: Very strong Verse: Resistant

Diseases: susceptible to yellow rust

Bakery value

Flour quite rich in gluten



Ear and grains, 2014





### PRINCE ALBERT

**Syn** Rostoff, Albert red wheat, red Rostock, Oxford red, prince albert red wheat, English, Principe alberto

Type Pure line variety

Priority: 185117

	Variétés filles				
Date d'obtention	1874	1844	1885		
Nom	Bordier	Browick	Lamed		
Obtenteur	Vilmorin	-	Vilmorin		
Issue de	Prince Albert x Noé	sélection dans Prince Albert	Prince Albert x Noé		
Nom	Dattel				
Obtenteur	Vilmorin				
Issue de	Prince Albert x Chiddam d'automne rouge	-	•		

English wheat from a selection in a population of Oxford red or Rostoff, which do not differ significantly from each other.

Introduced in France in 1851, it experienced a real boom in the North of France in 1880, replacing local varieties.

He was very famous in Nord-Pas-de-Calais until 1912.

This wheat is very leafy and has high and strong straw, which is especially suitable for the rich and deep soils of the plains and valleys. It must be sown early in the fall. Its hardiness is average and it is good to sow it a little thin so that it does not lodge. It ripens a little late.

Morphological description (Vilmorin 1880) Long and very

wide SPIKE with large fan-shaped spikelets

### STRAW

Very big

Very tall, very leafy, strong and stiff

#### **GRAIN**

red or reddish yellow, rarely very full

Agronomic characteristics

Alternativity: winter

Earliness: late
Tillering: strong
Verse: resistant

Diseases: sensitive to anthrax

Epi, grains 2014

Baking value Very good according to recent tests.

<sup>17</sup> Jonard, Essay on the classification of soft wheat, Volume 3, 1936, p213



## SHIREFF SQUAREHEAD

Syn. Shireff, Squarehead, White squarehead, English squarehead Sheriff Type

English wheat **Breeder** P. Shireff

Priority: 180018

Date d'obtention	Variétés filles				
	1855	1886	1890	1910	
Nom	Standart	Massy	Hybride du Trésor	Grenadier	
Obtenteur	P.Shireff	Vilmorin	Vilmorin	Svalöf	
Issue de	sélection dans Shireff	Shireff x Rouge de Bordeaux	Shireff x Gros bleu	sélection dans Shireff	

This variety was obtained by Mr. Patrick Shireff, botanist in Scotland. It is remarkable for its resistance to cold and does well in average quality soils.

This wheat replaced local wheat in 1880 in Nord-Pas-de-Calais, but froze in 1891 following a winter

exceptionally hard. It is reintroduced a few years later and remains widely cultivated in the North of France.

It gives very good yields in very rich soils.

but also good results on less fertile lands productive.

It was still found in the region in some crops in the 1950s.

Morphological description (Vilmorin, 1880) COB

Long, square Pyramidal STRAW

White, tall Straight and strong

### **GRAIN**

White, quite elongated, very beautiful and very full.

Agronomic characteristics

Alternativity: winter Earliness: Late

Tillering: Very strong Verse: Resistant

Diseases: Fears scalding, resists rust well

Bakery quality

Poor baking quality





Ear and grains, 2014

<sup>18</sup> Percival, Wheat in Great Britain, 1934, p109



### **TEVERSON**

**Syn** Chubb **Type** Pure line variety **Genealogy** unknown Date of birth: 1868

	Variétés filles					
Date d'obtention	1909	1922	<1936	<1936	<1936	
Nom	Travenant	Hybride 46	Hybride 48	Epi d'or	Hybride de Way	
Obtenteur	Denaiffe	Desprez	Desprez	Bonte	Denaiffe	
Issue de	Teverson x grosse tête	Teverson x hâtif inversable	Teverson x hätif inversable	Teverson x Oscar Benoist	Teverson x Vilmorin 23	

Wheat of English origin, its genealogy is poorly known. It would seem that it comes from a cross between Shireff squarehead and the Goldendrop. Other sources indicate that it comes from a population of Browick.

It is particularly well suited to the good lands of the North, where it has been widely used since 1870. It is a wheat that tillers a lot, has vigorous growth, is quite resistant to rust and lodging, ripens regularly, although a little late, and gives considerable yields in well-fertilized lands and especially after beets.

It was widely cultivated in Nord-Pas-de-Calais until the First World War, and was still present in fields in the region until 1950.

Morphological description (Vilmorin 1880) Reddish, wide

and compact spike

**STRAW** 

hollow, quite high

**GRAIN** 

red, medium to large

Agronomic characteristics

Alternativity: winter Earliness: late Tillering: good Verse: -

Diseases: sensitive to scalding

Bakery value

Questionable flour quality, very little gluten





Ear and grains, 2014



### **NOAH**

**Syn** Blue wheat, Noah's wheat, Little blue, Flouquet, Noah's Island, Noah's Island wheat, Wheat defiance, Noah's red March wheat, blue wheat defiance

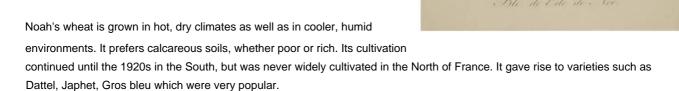
Priority: 182619

Country Wheat Type, Russian

	Variétés filles						
Date d'obtention	1830	1875	1888	1890	1892	1894	
Nom	Gros bleu	Aleph	Rouge de Bordeaux	Barbu à gros grain	Japhet	Gironde	
Obtenteur	*	Vilmorin	-	Vilmorin	Vilmorin	Vilmorin	
Issue de	sélection dans Noé	Blanc de Flandres x Noé	Issu d'une population de Noé	sélection dans Noé	sélection dans Noé	sélection dans Noé	

This wheat was apparently sorted from a batch from the black soils of Odessa by a miller from Lot et Garonne. One of the first farmers to cultivate the variety was the farmer of Mr. Marquis de Noé, on the Isle of Noé (Gers). Seduced by this high-quality wheat, Mr. de Noé also cultivated it on his land in Bréau, in Beauce, from where it quickly spread. It should be noted, however, that this variety is sensitive to smut and rust. It is early, vigorous and not very prone to lodging, but is easily shelled.

Before maturity and especially towards the time of flowering, the ear, the stem and even the leaves have a very striking glaucous tint which has given it the name of blue wheat. It was very widespread and highly appreciated. Its high grain yield and its very good baking quality compensate for its low straw production, and the advantage it has of ripening perfectly in stooks allows it to be cut before it risks shattering.



Morphological description (P. Jonard, 1936): EPI White, Agronomic characteristics Alternativity: alternative Earliness: early glaucous. Long, little or not awned, tapered. Tillering: Medium loose to semi-loose. Cold tolerance: Poor **GRAIN** Straw height: High Disease susceptibility: Rust Yellow, large, short, swollen **STRAW** Verse: not very sensitive Tall and fine Bakery value Very high baking quality

<sup>19</sup> Physiology and culture of wheat, 1886, p69

Aquitaine wheat



### **ODESSA WITHOUT BEARDS**

**Syn** Wheat from Algiers, White from Apt, Richelle from March, Richelle from Grignon, White Touzelle from Perthuis, White Touzelle from Porth, Milling wheat from Comtat Aquitaine wheat *type*Variety *genealogy* of the Odessa region



### **BORDEAUX RED**

Syn Bordeaux, Red Inversable, Fine Bladette, Red Bladette from Lesparre

Aquitaine wheat type

Genealogy Selection in Noah

	1	/ariétés fille	S	
Date d'obtention	1886	1895	1903	
Nom	Hybride de Massy	Blé de saumur de mars	B2	
Obtenteur	Vilmorin	Leblond	Schribaux	
Issue de	Rouge de Bordeaux x Shireff	Sélection dans Rouge de Bordeaux	Rouge de Bordeaux x Rouge d'Alsace	
Nom	Melbor			
Obtenteur	Vilmorin			
Issue de	Sélection dans Rouge de Bordeaux	-	-	

Ble de Bardeaux, en ronge inversable

Priority: 187020

This variety originated in Gers, then first spread around Bordeaux. It comes from a population of Noé. During the winter of 1870-1871, farmers from Seine-et-Oise and Seine-et-Marne, who had taken refuge in Bordeaux because of the war, brought back

a few bags as seed, and thus spread it in Brie and Beauce under the name of Bordeaux wheat. It subsequently spread throughout the rest of France.

This variety is quite hardy, very productive, undemanding on the nature of the soil and very resistant to lodging. In spring and until flowering, this wheat is very similar in its vegetation characteristics to Noah's wheat, in particular its very pronounced glaucous tint. Only it rises a little higher and, as maturity approaches, the ears instead of turning white take on an increasingly dark red tint. Bordeaux wheat does well in clayey soils and in loam soils; a calcareous subsoil is very suitable for it. It can be sown from October until mid-

#### March.

Morphological description (P. Jonard, 1936) Reddish to dark reddish, glaucous **spike**.

GRAIN red, quite short STRAW

Half hollow and tall

Bakery value

Very good baking quality

Agronomic characteristics

Alternativity: alternative Earliness: mid-late

Tillering: Low

Cold tolerance: average

Straw height: high

Disease susceptibility: yellow rust and scalding

Verse: quite resistant



20 Vilmorin, The best wheats, 1880, p86



### **ALLIES**

Syn Hybrid of Allies, Forel

Type of pure line variety

Genealogy (Massy x Parsel) x (Parsel x Japhet)

Breeder Vilmorin

	Variétés filles								
Date d'obtention	1909	1917	1917 1924		1936	1940	1944		
Nom	Poilu du Tarn	Vilmorin 29	Chanteclair	Hybride de Bersée	Champ joli	Hydride de Cloqueterie	Hybride de Bonnance		
Obtenteur	Vilmorin	Vilmorin	Tourneur	Blondeau	Tourneur	Bataille	Bataille		
Issue de	Alliès x Hâtif inversable x Rieti	Alliès x Vilmorin 23	Alliès x Hâtif inversable	Alliès x Vilmorin 23	Alliès x Hâtif inversable	Alliès x Hybride à courte paille	Alliès x Hâtif inversabl x Rieti		
Nom					Maximum Cambier		Paris		
Obtenteur		*	•   •	-	Cambier	•	Vilmorin		
Issue de					Alliès x K3		Alliès x Hâtif inversable		

It was widespread in Nord-Pas-de-Calais and cultivated until the 1930s. Its good baking value and its resistance to lodging were its main qualities. It gave satisfactory yields in good soils.

It is suitable for moderately fertile soils, but does not tolerate extreme cold well.

Morphological description (Jonard, 1936) White

spike, slightly awned, semi-compact

**STRAW** 

half hollow but strong

### **GRAIN**

white, hunchbacked, medium to short

Agronomic characteristics

Alternativity: alternative

Precocity: semi-early

Tillering: good

Verse: holds up well

Diseases: Resists rust, foot rot and scalding

Bakery value

Good value bakery



Date of birth: 1909

Allies, ears and grains 2014



### **GOOD FARMER**

Syn Good Farmer Hybrid, Dreadnought SensationType of pure line varietyGenealogy Gros Bleu x Blé seigeBreeder Vilmorin

		Variétés filles							
Date d'obtention	1910	1917	1918	1922	1924	<1936	1944		
Nom	Vilmorin 27	Bon moulin	Bon fermal	Innovation Bataille 30	Flèche d'or	Franc Comtois	Hybride de Lobau		
Obtenteur	Vilmorin	Vilmorin	Schribaux	Bataille	Station Galluis	Tourneur	Lepeuple		
Issue de	Bon fermier x Dattel x Japhet Parsel x Håtif inversable	Bon fermier x Alliès	Bon fermier x Alliès	Sélection dans Bon fermier	Bon fermier x barbu d'Ukraine x Yeoman	Bon fermier x Vuiteboeuf	Bon fermier x Institut agronomique		

It has the milling qualities of Gros bleu and the vigor of local wheat, Blé-seigle.

It was used for a long time in the region. Competition from new varieties did not prevent its culture until the 1930s. It is the parent of more than 10 varieties including Vilmorin 27, a very valued for many years.

It gives excellent yield in any type of soil provided it is well fed. Its quality baker is not guaranteed, we find in the works good as well as bad comments about this.

Morphological description (Jonard, 1936)

White **spike**, slightly awned, wide profile, cylindrical **STRAW** 

Medium size, excellent hold, hollow. **GRAIN** 

Medium to short in size, red to dark yellow.

Agronomic characteristics:

Alternativity: winter Earliness: semi-late

Tillering: medium Verse: resistant



Date of birth: 1894

Bon fermier, épi et grains 2014

Diseases: Resistant to brown rust and scalding, but susceptible to yellow rust

Bakery value

Bad



## **GOOD MILL**

Date of birth: 1917

**Type** Pure line varieties
Alliès x Good Farmer **genealogy Breeder** Vilmorin

Wheat selected by Vilmorin, from a cross between Alliès and Bon fermier.

It is suitable for average to poor soils where it gives good yields.

Its baking value was better than that of the best wheats in 1935.

It was not widely cultivated in Nord-Pas-de-Calais, although it was known for its resistance to cold and lodging. It was still found in 1941 on experimental plots at the

Genech high school.

Morphological description (Jonard, 1936) White

spike, more compact at the top

Rather short

**STRAW** 

Half-hollow, half-full.

**GRAIN** 

red, medium to large, wrinkled

Agronomic characteristics

Alternativity: half-winter, until the end of February

Earliness: late

Tillering: very good Verse: resistant

Diseases: quite sensitive to yellow and black rust

Bakery value

Very good baking value W of 234 in 1935



Ear and grains, 2014



Illustration of Vilmorin in 1935



## **BORDER**

Date of birth: 1874

Bordier Hybrid **Syn Type** Pure line variety
Prince Albert x Noah **genealogy Breeder** Vilmorin

This variety came from the first crosses made by Vilmorin.

The Bordier hybrid wheat is very well suited to the climate of Paris. It was highly regarded in the early 20th century in the North, until the First World War. It does well on all types of soil, especially granite soils.

It is known to provide a flour high in gluten, although there is little testing to prove this.

Morphological description (Vilmorin, 1880) COB

very white, long, loose STRAW

very white of average height, quite stiff, very hollow GRAIN

white, elongated.

Agronomic characteristics

Alternativity: winter Earliness: semi-early

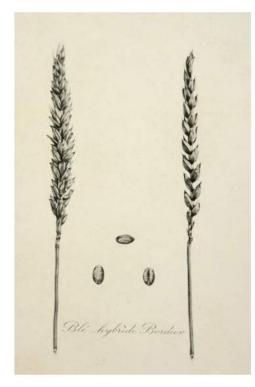
Tillering: good

Verse: quite sensitive

Diseases: -

Bakery value

Good for baking, rich in gluten





Ear and grains, 2014



## **EARLY WHITE CAMBIER**

Syn Early productive white, early white, Cambier 301

Type of pure line variety

Genealogy Selection in Alliès

Cambier Breeder

This variety was cultivated in Pas-de-Calais and replaced Vilmorin 23.

Little information has been collected for this variety.

Morphological description (Flandrin, 1949)

### **EAR**

white, slightly awned with a fairly wide profile

### **GRAIN**

white, medium short

### **STRAW**

hollow

Agronomic characteristics

Alternativity: winter

Precocity: semi-early

Tillering: good Verse: resistant

Diseases: susceptible to black rust

Bakery value

Good bakery quality

Ear and grains, 2014

Date of birth: 1929





## **CHANTECLAIR**

Syn Turner 611 Date of birth: 1924

Type of pure line variety

Genealogy Hâtif inversable x Alliès

**Breeder** Turner

	Variétés filles					
Date d'obtention	1940	1942	1943			
Nom	Jade	Sillon d'or	Vague d'épis			
Obtenteur	Tourneur	Tourneur	Tourneur			
Issue de	Chanteclair x Vilmorin 27	Chanteclair x Vilmorin 27	Chanteclair x Vilmorin 27			
Nom	Kirand					
Obtenteur	Tourneur	-	-			
Issue de	Chanteclair x Vilmorin 27					

In Pas-de-Calais, this variety replaced Vilmorin 23 as soon as it was created. Chanteclair is made from high yields in rich soils, it does not lodge and can be sown until mid-March if the sowing winter went badly.

In 1938 it still gave good yields in milling.

Morphological description (Jonard, 1936)

**EAR** 

white.

semi-loose, very often semi-compact.

### **GRAIN**

Color: red.

General appearance: average, quite short.

#### **STRAW**

Half-hollow, half-full.

Agronomic characteristics

Alternativity: alternative

Earliness: Semi-late

Tillering: Medium Verse: Resistant

Diseases: susceptible to rust

Bakery value

Good baking value, appreciated by millers



Ear and grains, 2014



## **DATEL**

**Type** Pure line variety
Red-spiked Autumn Chiddam x Prince Albert **genealogy Breeder** Vilmorin

	Variété fille
Date d'obtention	1917
Nom	Vilmorin 29
Obtenteur	Vilmorin
Issue de	(Dattel x Japhet Parsel) x (Hâtif inversable x Bon fermier)

The Dattel is the result of Vilmorin's first cross in 1874, between Prince Albert Wheat and the red-eared autumn Chiddam. Its open-field cultivation began in 1883 and made a strong impression.

Its use spread rapidly and despite the creation of many other varieties at the beginning of the 20th century, it remained in the crops of many farmers until the 1940s. Indeed, this wheat has a beautiful grain, of a very good baking quality and gives good yields, even during difficult years when other varieties produced little. It is a semi-early wheat that can be grown on land of average to high fertility. From the Dattel, the Vilmorin 27 wheat (Dattel x Japhet Parsel) x (Hâtif inversable x Bon fermier) was created around 1910.

Morphological description (Vilmorin, 1880)

SPIKE reddish to pale red, long, slightly awned,

semi-compact

**STRAW** 

Hollow, strong

WHITE

**GRAIN** 

Midsized

Agronomic characteristics

Alternativity: winter

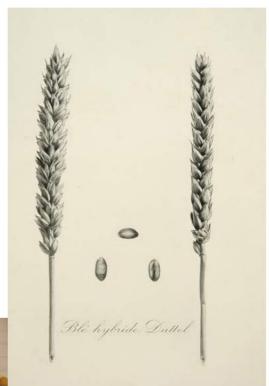
Earliness: Semi-early to late

Tillering: Good Diseases: Rust Verse: Very resistant

Bakery value
Very good baking
quality



Ear and grains, 2014



Date of birth: 1874



### **GOLDEN ARROW**

**Type** Pure line variety **Genealogy** Good Farmer x Ukrainian Bearded x Yeoman **Breeder** Galluis Station

Date of birth: 1924

	Variété fille
Date d'obtention	1933
Nom	Superhâtif
Obtenteur	Dromigny
Issue de	Sélection dans Flèche d'or

It gives good yields on soils with average fertility. However, this variety does not seem to be very popular: little information has been found.

Morphological description (Jonard, 1936)

White SPIKE, awned at the top with strong edges. Wide profile

### **STRAW**

Half-hollow, medium sized

### **GRAIN**

pale red, rounded, short, medium

Agronomic characteristics

Alternativity: alternative

Precocity: early Tillering: low

Diseases: susceptible to rust and smut

Pour: medium resistance

Bakery value

Good bakery quality

Ear and grains, 2014





## **GERBOR**

**Type** Pure line variety **Breeder** Laurent

reeder Laurent

Agronomic characteristics

Alternativity:

Earliness: late

Tillering: low

Pouring: average to good resistance

Diseases: very susceptible to black rust, susceptible to brown rust and smut, slightly susceptible to yellow rust

Bakery value:

Poor

Ear and grains, 2014

Date of birth: 1938





## **BIG BLUE**

**Type** Selected Wheat Noah x Shireff Squarehead **genealogy** Breeder unknown Date of birth: 1830

Variétés filles						
Date d'obtention	1890	1894	1898	1904	1936	
Nom	Trésor	Bon fermier	Hâtif inversable	D.4	Talisman	
Obtenteur	Vilmorin	Vilmorin	Vilmorin	Schribaux	Lemaire	
Issue de	Gros bleu x Goldendrop	Gros bleu x blé-seigle	Gros bleu x Chiddam d'automne rouge	Gros bleu x Epi carré	Gros bleu x Riéti	

This variety is said to have come from a selection between Noé and Shireff wheat in 1830 in the Nivernais. Its ear is stronger than that of its parent, more square at the base; its straw is taller, tillering is better and above all the large blue has much better resistance to rust. It prefers silico-clayey soils but gives good results on any type of soil.

The Gros bleu was a real success in France, but did not seem to be very cultivated in the North of France. It appeared there in 1897, when Vilmorin put it under observation.

Morphological description (Vilmorin, 1880) White

spike , semi-tight, slightly tapered
STRAW

white, thin, hollow, stiff, medium sized

red, large, very full, with a very marked furrow

Agronomic characteristics

Alternativity: alternative

Earliness: early
Tillering: Good

**GRAIN** 

Verse: not very sensitive

Diseases: resistant to brown rust, but sensitive to yellow rust

Bakery value

Very good baking value



Ear and grains 2014



# **EARLY WATTINES**

Type of pure line varietyGenealogy selection in Short-straw hybridBreeder Desprez

Agronomic characteristics

Alternativity:

Diseases:

Precocity: early Tillering: good Verse: resistant

Bakery value: W.125

Ear and grains, 2014

Date of birth: 1924





### **EARLY REVERSABLE**

Type of pure line variety

Vilmorin

Håtif inversable Alliès x Riéti

Genealogy Gros Bleu x White-spiked Autumn Chiddam

Strampelli

Obtenteur

Issue de Nom

Obtenteur

Breeder Vilmorin Variétés filles Date 1910 1912 1922 1924 1909 1919 1920 1926 d'obtention Poilu du Préparateur **Prolifique Bataille 28** Favori Chanteclair Cloches 26 Zara Nom Etienne Tarn nain

Tourneur

ction dans Hâtif inversable

Bataille

Obtoniou	-		-	-			rounieur
Issue de							Hātif inversable x Alliès
Date						1	
d'obtention	1927	1928	<1936	<1936	1938	1940	1944
Nom	Rationnel	Rollant	lle de France	Oscar Benoist	Pévèle	Président Riverain	Hybride de Bonnance
Obtenteur	Laurent	Belloy et Cie	Boremans	Benoist	Desprez	Desprez	Bataille
Issue de	Håtif inversable x K.3	Håtif inversable x Hybride å courte paille	Håtif inversable x Håtif inversable	Håtif inversable x Gironde	Hâtif inversable x jaune à épi carré	Hâtif inversable x Epi carré	Håtif inversable x Alliès x Riéti
Nom		Wilson jaune	0.0				Paris
Obtenteur	-	Benoist	*	•	-	-	Vilmorin
Issue de		Sélection dans Hâtif inversable		· ·			Hâtif inversable x Alliès

Schribaux

inversable x x Epi carré

Its main quality is to be productive and to give a quality grain. It combines the qualities of its 2 parents, namely the baking quality of Gros bleu and the productivity of the English Chiddam autumn wheat with white ears. However, this wheat requires good land.

It was very popular with peasants until 1920, particularly in the North of France.

After this date, it was still used by breeders during crossbreeding. At least 18 daughter varieties are referenced to it!

Morphological description (Tribondeau, 1928)

### **EAR**

Very white, awned, with very open spikelets **GRAIN** 

Heavy, gray yellow or pale yellow, large **STRAW** 

Light yellow almost white short

Agronomic characteristics

Alternativity: alternative

Earliness: early Tillering: low Verse: resistant

Diseases: susceptible to orange rust

Bakery value

Good bakery quality

Ear and grains, 2014

Bonte

Hätif inversable Wilhelmine

Date of birth: 1898

Tourneur

Saint Pierre

Tourneur

Benoist

Hâtif inversable x Gironde x Japhet





## **HEURTEBISE**

**Type** Pure line varieties **Genealogy** Vilmorin 23 x Yga x Old Swedish wheat Blondeau **Breeder** 

Although it comes from well-known parents, this variety does not seem to have been very famous. Very little information has been collected. Its date of obtaining corresponds to the period of large post-war productions, and of a significant number of varietal creations.

Morphological description (Jonard, 1955)
EAR
Narrow-eared white
STRAW.
Full and short
GRAIN
Red, quite short, tends to be hunchbacked
Agronomic characteristics  Alternativity: winter
Precocity: early
Tillering: strong
Pour: medium resistance
Diseases: susceptible to black and brown rust, resistant to smut and yellow rust
Bakery value

Ear and grains, 2014

Date of birth: 1954



Average baking quality



## **HYBRID 40**

Date of birth: 1928

Syn Bell, Bell 32, Benoist 40

Type Pure line variety

Genealogy Selection in Wilson Yellow

Breeder Benoist

	Variétés filles					
Date d'obtention	1927	1930	1937	1949		
Nom	Annie	Président Tardieu	Beauceron	Tadépi		
Obtenteur	Dromigny	Leblond	Benoist	Benoist		
Issue de	Hybride 40 x Précoce Capelle	Hybride 40 x Alsace x Japhet	sélection dans hybride 40	Hybride 40 x Hybride du Joncquois		

It was very famous in the North in 1930 and for several years. It is a wheat that is very demanding on the richness of the soil. It only grows on very fertile land where it gives high yields.

It is known to have very good baking quality in its time.

Morphological description (Jonard, 1936)

#### FΔR

White, square sections, semi-compact

STRAW

Hollow or semi-hollow.

Short

### **GRAIN**

pale red

medium to large, wrinkled

Agronomic characteristics

Alternativity: winter
Precocity: mid-early
Tillering: medium
Verse: Very resistant

Diseases: susceptible to yellow rust

Bakery value
Very good



Ear and grains, 2014



## **HYBRID OF PEACE**

Type of pure line variety

Chambord x hasty reversible genealogy

Breeder Vilmorin

	Variétés filles					
Date d'obtention	1926	<1935	<1949			
Nom	Providence	Paix 13	Monette			
Obtenteur	Lemaire	Vilmorin	Tourneur			
Issue de	Hybride de la Paix x Yeoman	Sélection dans Hybride de la Paix	Sélection dans Hybride de la Paix			
Nom			Vilmorin sud			
Obtenteur	-	-	Vilmorin			
Issue de			Hybride de la Paix x Ardito			

It is grown on rich soils where it gives good yields. It can be sown until February.

Created in 1910 by Vilmorin, this wheat was widely cultivated in the North of France after the First World War.

In 1928 it was found in most of the fertile lands of Pas-de-Calais.

Morphological description (Tribondeau, 1928)

### **EAR**

Glaucous red, square shape, thick

### **GRAIN**

Big, yellow, very full

### **STRAW**

Quite rigid, white Medium sized

Agronomic characteristics

Alternativity: alternative

Earliness: late
Tillering: medium
Verse: very resistant

Diseases: susceptible to smut and yellow rust

Resistant to orange rust

Bakery value \_\_\_\_\_

Fair baking quality

Ear and grains, 2014

Date of birth: 1910





# TREASURE HYBRID

Type of pure line variety
Shireff Squarehead X Big Blue Genealogy
Breeder Vilmorin
Synonyms Treasure

Morphological description (Tribondeau, 1928) **EAR** 

**GRAIN** 

**STRAW** 

Agronomic characteristics

Alternativity:

Precocity: early Tillering: strong Verse: resistant

Diseases:

Bakery value

Ear and grains, 2014

Date of birth: 1890





## **INNOVATION BATTLE**

Syn Battle 30Type of pure line varietyGenealogy selection in Good FarmerBreeder Battle

This wheat gives good yields on average or poor soils in the North of France. It was selected in Pévèle, by Bataille, from a variety well known at the time: the Bon fermier.

Morphological description: (Jonard, 1936)

#### **EAR**

white, half loose

#### **STRAW**

Half full

Midsized

#### **GRAIN**

red, short, big

### Agronomic characteristics:

Alternativity: alternative
Earliness: semi-late
Tillering: medium
Verse: not very resistant

Diseases: Resists rust

Bakery value:

Average baking strength

Ear and grains, 2014

Date of birth: 1922





# **AGRONOMIC INSTITUTE**

**Type** Pure line variety
Rieti x Epi carré x Hâtif inversable **genealogy Breeder** Schribaux

	Variétés filles				
Date d'obtention	1924	1941	1943		
Nom	Hybride du Joncquois	Hybride de la Tour	Bretagne		
Obtenteur	Desprez	Blondeau	Desprez		
Issue de	Vilmorin 23 x Institut agronomique	Vilmorin 23 x Institut agronomique x Providence	Institut agronomique x Goldendrop		
Nom			Petit Quinquin		
Obtenteur	<b>⇒</b> 8	-	Blondeau		
Issue de			Vimorin 23 x Institut agronomique x Providence		

This wheat was known to be one of the most suitable for the northern region. It was widely used after the First World War. It was resistant to cold and foot rot, and was still cultivated in the 1930s. It gave high yields in rich soils. It was a little sensitive to lodging, but its biggest flaw was its poor baking quality. It was even not recommended for bread making.

Morphological description (Jonard, 1936)

#### **EAR**

White, very awned with a narrow profile

#### **STRAW**

Medium sized, steep hollow

#### **GRAIN**

White, medium to large and wrinkled

Agronomic characteristics

Alternativity:

Precocity: Very precocious

Tillering: Good Diseases:

Pour: Medium resistance

Bakery value

Poor baking quality: W<100

Ear and grains, 2014

Date of birth: 1912





### **JAPHET**

Syn wheat God, Red marvel, Mansholdts Japhet, Japhet Vilmorin, Early yellow wheat, Japhet 21

Type of pure line variety

**Genealogy** From Noah **Breeder** Vilmorin

This wheat was found by Vimorin in the polders of Mont-Saint-Michel in a population of Noah.

He observed it for several years before marketing it in 1892.

The Japhet has a taller straw than the Noah, its ear is larger and its grain is more elongated. It is very resistant to rust.

Sown in spring, it gives equally good yields than autumn wheat. However, he does not fear winter and can be sown in autumn. It is widely cultivated from its appearance and will only partially lose its popularity in 1910 with the arrival of Gironde wheat and the Good Farmer.

Morphological description (Jonard, 1936)
White, non-awned, wide profile COB
GRAIN red, often vitreous, medium and short
STRAW half-hollow, tall and thin

Agronomic characteristics

Alternativity: alternative Precocity: early

Tillering: medium Verse: resistant

Diseases: susceptible to smut and yellow rust

Bakery value \_\_\_\_\_

Very good baking quality, flour rich in gluten



Date of birth: 1892

Ear and grains, 2014





# **LATER**

Date of birth: 1948

Type Pure line variety Genealogy Selection in Vilmorin 23 **Breeder** Lemaire

It has the qualities of its parent: resistant to lodging, productive. It also has a better baking quality. This wheat does not seem to have had great success in our region, but it should be noted that it appeared at the same time as Cappelle wheat, a great variety of the time.

### Morphological description (Vilmorin 1947) EPI

white, long, tapered, semi-loose

#### **STRAW**

Half hollow to hollow , short to medium

#### **GRAIN**

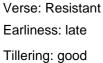
red, lying down

Agronomic characteristics

Alternativity: half-alternative

Earliness: late

Diseases: resistant to yellow rust and smut, susceptible to black and brown rust



#### Baking value Good,

but its baking strength was rated average in 1956.



Ear and grains, 2014



### LITTLE QUINQUIN

Date of birth: 1943

**Type** Pure line variety **Genealogy** Vilmorin 23/Agronomic Institute//Providence
Blondeau **Breeder** 

It is known for having a fairly good baking quality. It is reserved for very good land. It gave correct yields, but lower than other more exceptional varieties.

Few references in Nord-Pas-de-Calais have been found although the selector is from the region.

Diseases: Resistant to yellow rust, but susceptible to black rust, brown rust and smut.

Morphological description (Flandrin, 1949) White, semi-

loose spike

#### **STRAW**

half full and short

#### **GRAIN**

fat

Agronomic characteristics

Alternativity: half-alternative

Precocity: semi-early Tillering: Good

Pouring: good resistance

Ear and grains, 2014

Bakery value
Pretty good



# **PICARDY DESPREZ**

Date of birth: 1923

Syn PicardyType Pure line varietyGenealogy Agronomic Institute x AllièsBreeder Desprez

This variety was cultivated in the North without making its mark on its time. It had poor baking quality.

Morphological description (Flandrin, 1949) EPI

white, half loose

#### **STRAW**

half full, a little short

#### **GRAIN**

white, slightly rounded, good quality

Agronomic characteristics

Alternativity: alternative

Earliness: early

Tillering: Good

Pouring: very good resistance

Diseases: generally resistant to fungal diseases, sensitive to foot rot

Bakery value

Bad



Ear and grains, 2014



## PREPARER ETIENNE

Date of birth: 1912

**Type** Pure line variety
Rieti x Epi Carre x Hatif Inversable **genealogy Breeder** Schribaux

Selected in 1912 by Professor Schribaux at the National Institute of Agronomy. This wheat was very widespread in France after the First World War. It replaces the Date on wetlands or on the edge of forests.

This wheat produces good yields on less fertile or less cultivated land. It is particularly appreciated for its resistance to cold.

Wheat widely cultivated after the war in the Nord-Pas-de-Calais region.

Morphological description (Jonard, 1936) EPI

white, quite short, awned at the top

#### **STRAW**

Hollow, big, strong.

#### **GRAIN**

red, big and short

Agronomic characteristics

Alternativity: Half-winter

Precocity: semi-early Tillering: medium Verse: resistant

Diseases: susceptible to yellow and black rust

Bakery value

Average quality



Ear and grains, 2014



### **PROVIDENCE**

**Type** Pure line variety
Peace x Yeoman **genealogy Breeder** Lemaire

Date of birth: 1926

	Variétés filles		
Date d'obtention	1941	1943	
Nom	Hybride de la Tour	Petit Quinquin	
Obtenteur	Blondeau	Blondeau	
Issue de	Vilmorin 23 x Institut agronomique x Providence	Vimorin 23 x Institut agronomique x Providence	

This wheat produces high yields in good soils. It was very popular in the 1930s. It was particularly renowned for its very good baking quality.

Morphological description (Flandrin, 1936) EPI

white, tapered and fairly narrow semi-loose

#### **STRAW**

Half hollow

#### **GRAIN**

Red to pale red, medium sized

Agronomic characteristics

Alternativity: half-winter

Precocity: early
Tillering: strong
Verse: resistant
Diseases: -

Bakery value

Good baking value: W > 150

Ear and grains, 2014





# **RENÉ LEBLOND**

Date of birth: 1949

**Type** Pure line variety
Japhet x Alsace **genealogy Breeder** Leblond

It is little referenced in Nord-Pas-de-Calais because at that time, the varieties were quickly replaced by new selections.

It gives good yields on average to poor soils.

Morphological description (Flandrin, 1949) White, long,

tapered, semi-loose spike

#### **GRAIN**

Big, long

#### **STRAW**

tall and thin

Agronomic characteristics

Alternativity: half-alternative

Verse: Resistant Earliness: late

Tillering: good

Diseases: susceptible to yellow rust and scalding

Bakery value
Very good



Ear and grains, 2014



## **VILMORIN 23**

**Syn.** Hybrid 23, autumn productive **Type** Pure line variety **Genealogy** (Melbor x Grosse tête) x (Japhet x Parsel) **Breeder** Vilmorin

Date of birth: 1909

				Variété fille			
Date d'obtention	1917	1924	1926	1927	1929	1930	<1936
Nom	Vilmorin 29	Hybride du Joncquois	Noël	Hybride Canonne	Alma	Hybride Bersée	Epi d'or
Obtenteur	Vilmorin	Desprez	legland	Cambier	Blondeau	Blondeau	Bonte
Issue de	Vilmorin 23 x Alliès	Vilmorin 23 x Institut agronomique	Vilmorin 23 x variation de Japhet	Virmmorin 23 x Håtif de Cambier	Vilmorin 23 x Vilmorin 27 x Alliès	Vilmmorin 23 x Alfiès	Teverson x Oscar Benoist

Date d'obtention	1937	1941	1942	1943	1948	1954	
Nom	Cote d'or	Hybride de la Tour	Auchy-Cambier	Franc nord	Later	Heurtebise	
Obtenteur	Vilmorin	Blondeau	Cambier	Blondeau	Lemaire	Blondeau	
Issue de	Vilmorin 23 x Paix 13 x Mouton a épi rouge	Vilmorin 23 x Institut agronomique x Providence	Vilmorin 27 x Vilmorin 29	Vilmorin 23 x Yga	Sélection dans Vilmorin 23	Vilmorin 23 x Yga x Vieux Blé Suédois	
Nom			Pax	Petit Quinquin	_		
Obtenteur			Cambier	Blondeau			
Issue de			Vilmorin 23 x Vilmorin 27	Vimorin 23 x Institut agronomique x Providence			

It is not suitable for southern regions where it gets scalded but does not tolerate very cold regions. It seems rather well adapted to our climates, where it gives good yields in all soils if they are nourished.

It was one of the best-known varieties in Nord-Pas-de-Calais between 1920 and 1930. This wheat will however be abandoned because of its poor baking quality.

Morphological description (Jonard, 1936) EPI

white, quite long, loose

### **STRAW**

Half-full, rigid 1.25m high

#### GRAIN

dark red, medium tapered

Agronomic characteristics

Alternativity: alternative Precocity: Precocious

Tillering: good Verse: resistant

Diseases: susceptible to rust and resistant to smut

Bakery value

Poor baking quality: W<80 and low gluten %

Ear and grains, 2014





### **VILMORIN 27**

Syn. Hybrid 27 Date of birth: 1907

Type Pure line variety Genealogy
(Dattel x Japhet Parsel) x (Hâtif Inversable x Bon Fermier)
Breeder Vilmorin

			Variétés filles		
Date d'obtention	1929	1938	1940	1942	1943
Nom	Alma	Yga	Kirand	Pax	Vague d'épis
Obtenteur	Blondeau	Blondeau	Tourneur	Cambier	Tourneur
Issue de	Vilmorin 27 x Vilmorin 23 x Alliès	Vilmorin 27 x Red Fife	Vilmorin 27 x Chanteclair	Vilmorin 27 x Vilmorin 23	Vilmorin 27 x Chanteclair
Nom		Blé de l'Yveline	Druchamp	Sillon d'or	Normandie
Obtenteur	-	Benoist	Benoist	Tourneur	Leblond
Issue de		Vilmorin 27 x Wilson	Vilmorin 27 x Flêche d'or	Vilmorin 27 x Chanteclair	Vilmorin 27 x Hybride 40
Nom		<u>.</u>	Flandres	Auchy-Cambier	Polonium
Obtenteur			Desprez	Cambier	Bormans
Issue de			Vilmorin 27 x PLM	Vilmorin 27 x Vilmorin 29	Vilmorin 27 x lle de Franc
Nom		-	Jade		
Obtenteur			Tourneur	-	
Issue de			Vilmorin 27 x Chanteclair		

	Variétés filles				
Date d'obtention	1944	1945	1946		
Nom	Renfort	Nord-Desprez	Cappelle		
Obtenteur	IRA Versailles	Desprez	Desprez		
Issue de	Vilmorin 27 x PLM	Vilmorin 27 x Hybride du Joncquois	Vilmorin 27 x Hybride du Joncquois		
Nom	Terroir		Champagne		
Obtenteur	Bormans	-	Lafite		
Issue de	Vilmorin 27 xSt-Hubert		Vilmorin 27 x Hybride de Pologn		

Vilmorin selected Vilmorin 27 at the beginning of the 20th century from its first selections.

This wheat gives very good yields on rich soils, plateau silts and alluvial land.

It was very widespread in the North, and became one of the most cultivated wheats until the 1930s.

Around 1950, it remained recognized as a good wheat for bread making with a W of 120 (compared to 240 for Soissons). Its popularity interested breeders who used it in numerous crosses.

The Desprez house notably created the Cappelle, which was very popular until the 1970s.

Morphological description (Vilmorin 1880) SPIKE:

white, slightly tapered, semi-compact STRAW: Semi-full

**GRAIN:** pale red

Agronomic characteristics

Alternativity: alternative

Precocity: semi-early

Tillering: good Verse: resistant

Diseases: Resistant to yellow rust, susceptible to black rust and smut

Bakery quality

Good at baking

W<120





# **VILMORIN 29**

Date of birth: 1917

Genealogy Vilmorin 23 X AlliesBreeder VilmorinHybrid Synonym 29





## **WILSON YELLOW**

Syn. Wilson, Caigette
Genealogy selection in Hâtif Inversable Breeder
Benoist

Morphological description

Ear and grains, 2014

EAR

GRAIN

STRAW

Agronomic characteristics
Alternativity:
Earliness: semi-late
Tillering: medium
Verse: very resistant
Diseases: black rust

Bakery value:

average



### **YGA**

**Type** Pure line variety
Vilmorin 27 x Red Fife **genealogy**Blondeau **Breeder** 

Date of birth: 1938

	Variétés filles		
Date d'obtention	1943	1954	
Nom	Franc nord	Heurtebise	
Obtenteur	Blondeau	Blondeau	
Issue de	Yga x Vilmorin 23	Yga x Vilmorin 23 x Vieux Blé Suédois	

This variety selected by Blondeau takes its name from the first letter of his 3 daughters.

This wheat produces high yields on rich soils. After the 1950s, it produced many daughter varieties (not listed).

Little information and description has been found.

Agronomic characteristics
Alternativity: Alternative
Precocity: -
Tilling: - Pouring: good resistance
Diseases: very sensitive to foot rot, sensitive to yellow rust
Bakery value

Good baking value: W between 100 and 150

Ear and grains, 2014

