

## Cross-visit France: Organic seed production in cooperative

### Introduction

Within the research project of LIVESEED we want to organise visits to demonstrate and promote smart practices in organic seed production. The aim is to increase productivity and quality in organic seed production across Europe, by learning from each other. The cross-visits will demonstrate smart practices and promote exchange among stakeholders to increase productivity and quality in organic seed production. The methodology will be based on the one developed in the EU H2020 project Agrispin. The method is useful to organise exchange between professionals with similar tasks in different regions.

The aims are to:

- Enable mutual learning process amongst professionals engaged in organic seed production
- Reveal regional particularities as well as lessons to be generalized
- Inspire and stimulate regional partners
- Forge relationships as a basis for a professional network that can sustain after the project period

This first cross-visit was organised by ITAB in France with the topic of organic seed production in cooperative. The visit took place from Monday the 4<sup>th</sup> to Thursday the 7<sup>th</sup> of June 2018, please find the program in the attachment.

Issues covered by the visits:

- organic seed production in cooperative for **cereal, legume** and **forage** crops
- crop management for seed production, tools, seed cleaning and storage, seed quality management
- variety testing
- heterogeneous population (wheat CCPs)
- seed certification
- Formal seed system

For the 4-day visit 20 people participated from Poland, Hungary, Romania, Bulgaria, Greece, Spain, Portugal, Netherlands, Germany, Italy. The participants were experts from seed companies, organic farmers, advisors, organic certification, researchers and agricultural trainers. They have been selected as they are involved in the organic sector, have knowledge on seed production, have capacity to multiply and report in their country 'change agents', a list can be found in the attachment.

### Impressions by participants

The group is quiet divers, after a short introduction round the participants quickly engaged with each other and exchanged their knowledge. The general notion and atmosphere was positive and full of cooperation. The participants shared their knowledge, discovered a heterogenous implementation of the regulations among Europe, and discussed cultivation techniques.

After the visits the participants have collected topics they would like to discuss more in-depth, list of topics and points for discussion. Four main topics have been selected and discussed in smaller groups and presented at the symposium on 7<sup>th</sup> June in Paris.



The proposed topics are:

- Organic seed production of arable crops in practice
- How to control weeds in organic seed production of arable crops through smart agronomic practices: crop rotation, lays, and crop mixtures
- How to manage common bunt by the use of analyses and white vinegar seed treatment
- How to create a dynamic population of wheat adapted to local growing conditions – new breeding approaches
- How organic seeds and varieties can be a tool for added values to farmers and cooperatives
- Functioning in cooperative or association for arable crop and seed production
- The different aspects of organic seed quality
- Cross-visits as a tool to share knowledge and foster organic seed use and production
- Organic seed marketing strategies, small scale vs. large scale production
- How to set up variety trials for farmers
- EU Regulations: various implementation in different countries, heterogeneous pop, adapted criteria for OA, organic seed regulation implementation

## Reflection on the methodology

Before the visit a detailed methodology has been established to describe the different steps and elements of the cross-visit. In France this methodology is applied for the first time, a reflection of the methodology will be used to adapt the initial document.

ITAB took the initiative to develop farm visit documents which describe the farm and what they do, the documents are in the attachment. These documents were helpful and should be done for all visits. To have the document helped to overcome the language barrier and it could be translated in the bus to the non-English speakers.

Each day there was an element for reflexion time. The participants worked in small groups, the same groups for each reflexion enabled the possibility for in-depth discussion. The questions addressed were: How do you feel? What did you learn? What are your questions or suggestions?. This helped very much to have a focussed reflection and exchange on the visits.

It was very successful to identify together with partners the topics addressed during visits and to make the vote for the most interesting/relevant/important for them. This collective decision created ownership and lead to an efficient production of practice abstracts. The methodology was that everyone writes topics on post-it (one post-it for one topic) for 5 minutes, then they were clustered and rephrased by the cross-visit organiser. This final topic list is shared with participants and they can provide feedback and adapt topics if something is misunderstood or missing. Afterwards the participants have three votes and can vote for the topic on which they want to work on.

For the symposium, it was interesting to group 2 events at the same time, one to report the cross-visit outputs (in about 1 hour), and a specific focus on a LIVESEED issue (heterogenous pop, in France). In this way different people meet and new theoretical input is combined with presenting the outcomes of the cross-visit.

**Improvements** on the methodology needs to be done for the next cross-visits. The language barrier has to be addressed by having more visual elements during presentations and discussions.



The observation cards as developed by Agrispin were not so much used, the participants are experts and come with specific questions to the visit and guidance is not needed, we may skip the observation cards. Maybe it is helpful to ask participants before the visit about what they are interested in.

It is important to allocate time for collecting feedbacks and farewells before the symposium, otherwise it is an open end without a clear goodbye. The organiser, host, needs to consider time spent in the bus and see how long journeys are compared to the interest of the visit.

If there is video recording the time for interviews should be included in the programme, otherwise it may disturb the group dynamic and planning of other activities.

As an additional outcome it might be interesting to ask participants to identify topics for videos and take them afterwards, e.g. a specific technique of seed production.

## Cross- visit Outcomes

The cross-visit provided a good opportunity to develop together dissemination material with all participants. The prior knowledge and experience was very valuable to write 4 Practice Abstracts with the titles:

- Advantages of organic seed production for farmers
- Cooperatives as a model to improve organic seed and crop production
- Dynamic Populations
- Common bunt seed treatment of wheat with white vinegar

Further a video was produced to illustrate the cross-visit and explain the method and the topic to share it with a broader audience.

The participants gained new insights to take home and provided suggestions for UBIOS the seed producer:

- Cocebi has 200 members (organic farmers; 100% organic), a great potential for participatory plant breeding. Could be a good opportunity to develop new crops or products with a specific quality for a better added value.
- To better integrate small scale farmers in seed production
- Include local/ancient varieties and dynamic populations to explore new market opportunities and trends
- Good step to integrate the seed production in the grain supply chain
- Payment to farmers is still linked to performances and not for their sustainable practices

## Impact

The participants stated already at the end of the visit that they got many new insights and ideas. Further they appreciated this exchange with other professionals from other European countries, many new relationships have been established.

A questionnaire in November 2018 will close the full evaluation of the visit.



## Annex

### List of Participants

<b>Name</b>	<b>Linked Organisation</b>	<b>Country</b>
Alonso Navarro Chaves	SEAE	ES
Roberto Ruiz de Arcaute	SEAE	ES
Carlos Serrano Salcedo	ECOVALIA	ES
Toncea Ion	NARDI	RO
Victor Petcu	NARDI	RO
Stoichev Chavdar Ivanov	Bioselena	BG
Miguel Malta	IPC	PT
Luis Tiago Silva	IPC	PT
Ass. Prof. Beata Feledyn-Szewczyk	IUNG	PL
Ewelina Zetkowska	IUNG	PL
Gabor Toth	MTA ATK	HU
Boldizsar Horvath	OMKI	HU
Marco Rusconi	RSR	IT
Antonio Lo Fiego	RSR	IT
Kostas Koutis	AEGILOPS	EL
Frédéric Rey	ITAB	FR
Alexandra Fuss	IFOAM EU	BE
Korinna Varga	OMKI	HU
Edwin Nuijten	LBI	NL
Floor van Malland	LBI	NL
Stéphanie Klaedtke	ITAB	FR



This project received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 727230.

# Cross-Visit in FRANCE

## Programme

**Dates:** from Monday the 4<sup>th</sup> to Thursday the 7<sup>th</sup> of June 2018  
Start at 13:00 the 4<sup>th</sup> and end at 13:00 the 7<sup>th</sup>.

**Issues covered by the visits:** organic seed production in cooperative, **cereal, legume** and **forage** crops, crop management for seed production, tools, seed cleaning and storage, seed quality management, variety testing, heterogeneous population (wheat CCPs), seed certification, links with breeders & research.

### Program

#### Day 1 (04/06): at Ubios Seed Station, Maise (91)

- 13:00 **Welcome**
- 13:30 Get Acquainted, presentation of each participants
- 14:30 Get Oriented, presentation of the hosts UBIOS and ITAB, the context of organic seeds in France
- 15:10 Get Updated : program and method of the cross-visit
- 15:40 Departure for Visit 1, bus transfer
- 16:00 **Visit 1:** organic farmer producing seeds for Ubios and testing varieties of durum wheat and oat (J-P Bouchet)
- 17:30 Departure from visit 1
- 17:50 Reflection time about Visit 1 (Ubios meeting room)
- 19:00 Diner and overnight in Maise Hotel "La Belle Etape"

#### Day 2 (05/06): in Yonne (89)

- 08:00 Departure from Maise Hotel "La Belle Etape" (transfer by bus)
- 09:45 **Visit 2:** organic farmer producing seeds (Vincent Lefèvre)
- 11:25 Bus Transfer
- 11:45 Reflection time about Visit 2
- 12:30 Lunch at the Restaurant "Moulin de Vanneau"
- 13:45 Bus Transfer
- 14:00 **Visit 3:** Cocebi (Ubios sister organisation) seed testing platform : 600 plots (wheat, triticale, spelt...)
- 15:00 Bus Transfer
- 16:00 **Visit 4:** presentation of Cocebi cooperative and its organisation (in Mity)
- 17:15 Reflection time about day 2, preparation of the cross-visits outputs (e.g. practice abstracts)
- 19:00 Diner in Nity at the Restaurant "La Beursaudière"
- 21:00 Bus Transfer
- 22:50 Back to Maise Hotel "La Belle Etape"



**Day 3 (06/06) : in Maisse (91) - Ubios station**

- 09:30** **Visit 5:** Visit of UBIOS cleaning and storage station: management of the activities, reception, seed cleaning and storage, seed conditioning, and seed quality lab.
- 13:00 Lunch
- 14:00 Preparation of feedback for the Symposium and of the cross-visits outputs (Practice Abstracts)
- 17:30 Bus Transfer
- 18:45 Arriving in Paris (at “un *Hotel a Bastille*”)
- 19:15 Diner in a restaurant in Paris

**Day 4 (07/06): Workshop** within Paris (at FPH, 38 Rue Saint-Sabin)

- 09:45** Welcome and coffee
- 10:00 **Symposium** with Ubios board (Feedback from the group about what they saw, understood, not understood, take for home messages/innovations/smart practices)
- 10:55 Coffe break
- 11:15 **Workshop** on heterogeneous population (with the French authorities GEVES + Ministry)
- 13:00 End of the cross-visit n°1 – Organic lunch delivered in the meeting room





# LIVESEED

## FARM VISIT #1

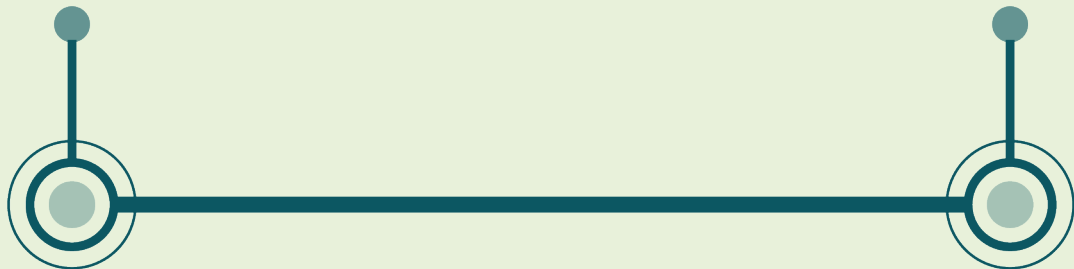
JEAN-PIERRE BOUCHET - 45330 ORMEAU BELLESAUVE  
CONTACT : JJPBOUCHET@FREE.FR

**1987**

Takes over the family farm,  
already organic

**2005**

Expansion over 65 ha



### Why organic ?

"I have worked as an organic farmer all my life, as my father started marketing organic products in 1969. He was a pioneer. Furthermore, our soils, containing a lot of stones, are quite suited for this type of agriculture."

**Jean-Pierre Bouchet**

### Production

**Agricultural area :** 114ha

**Crops :**

	ha	Yield cwt/ha
Faba bean	20	35-40
Wheat	15	50
Spring barley	15	60
Winter oat	14	40
Alfalfa	14	
Spring oat	13	
Flax	11	15-20
Rye/lentil	7	

**Typical crop rotation :** Alfalfa (2 years) ► wheat ► flax or wheat ► spring barley ► naked oat ► faba bean or rye / lentil ► spring or winter barley

#### Market outlet :

- Ubios seed cooperative : seed (70% of total production)
- Biocer cooperative : flax, oil seeds, rye, lentil, wheat
- Sidésup (granulated animal feed) : alfalfa

#### Organic seed multiplication in 2018 :

4 seed contracts with BIOCER :

- 12 ha Soft Wheat «TENGRİ»
- 14 ha Faba bean «NEBRASKA»
- 7,5ha Durum Wheat «PESCADOU»
- 6,5ha Soft Wheat «RENAN»

## THE SOIL - PH 7-9

- ▶ On a geological stratum of molasse deposits "Molasse du Gâtinais"
- ▶ Shallow clay-limestone soils
- ▶ Deep clay-loam soils

## WATER

### Strategy

"Against weeds, I combine the use of light machinery and of a well-tended plant cover. For fertility, I don't skimp on external inputs, which pay off well at harvest."

**Jean-Pierre Bouchet**

### Workforce

1,2 labour units (seasonal workers for harvest)

### Know-how

- ▶ Reduced tillage (tillage every 5 years)
- ▶ Weed control (agronomic techniques)
- ▶ Soil cover (faba bean or well-tended mixes)
  
- ▶ Intercropping (rye-lentil)
- ▶ Fertilisation (soil life)
- ▶ Precision seeding

Inputs from Jean-Pierre Bouchet, GRAB de Bio Centre (recueil des savoir-faire paysans) and Grégoire Rouyer (Ubios)  
Layout : ITAB  
Translation : Stéphanie Klaedtke (ITAB)  
Edition : Frédéric Rey (ITAB)



This project received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°727230.



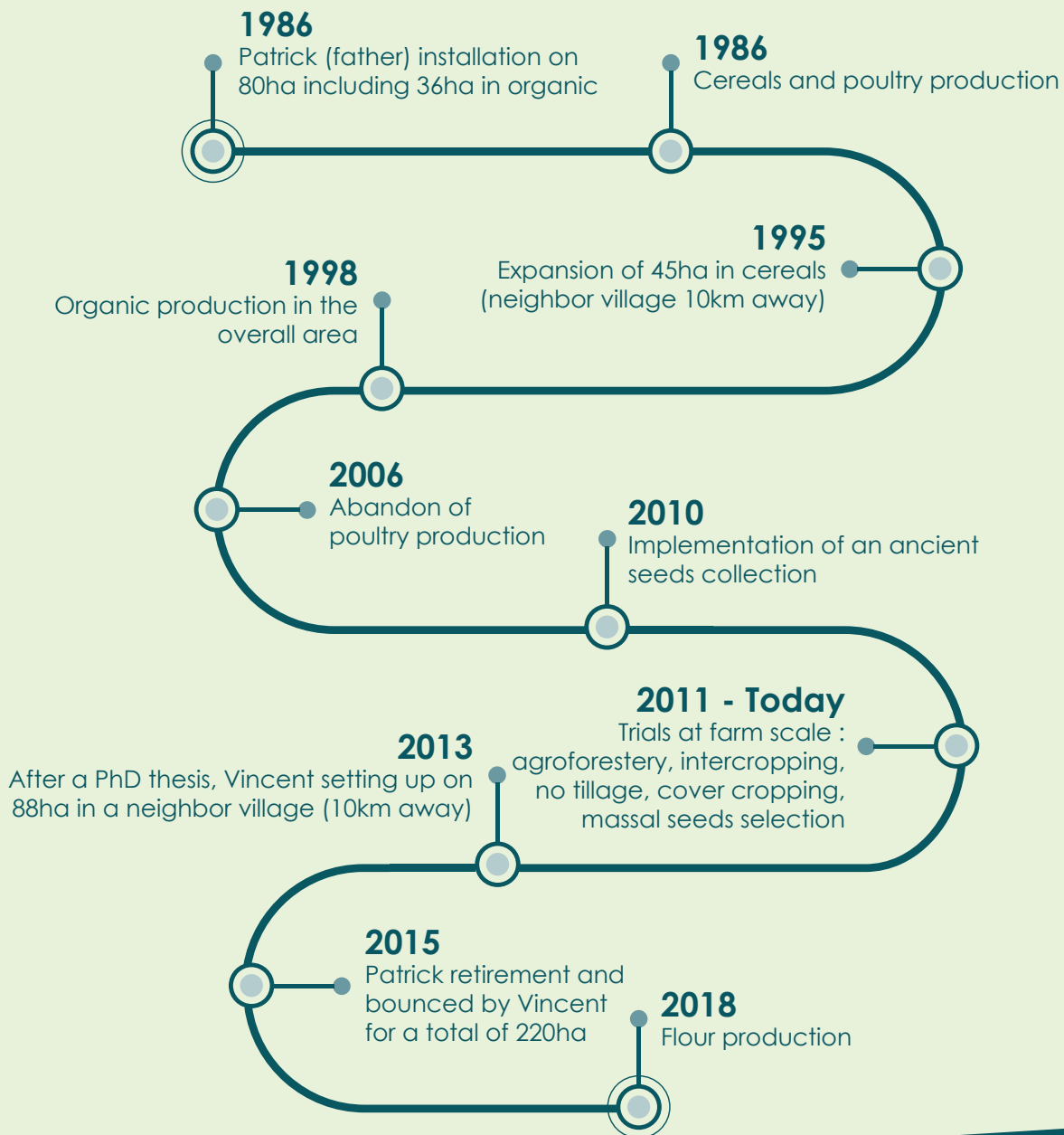


# LIVESEED

## FARM VISIT #2

VINCENT LEFÈVRE- 89170 ST-FARCEAU

CONTACT : LEFEVREV@YAHOO.FR



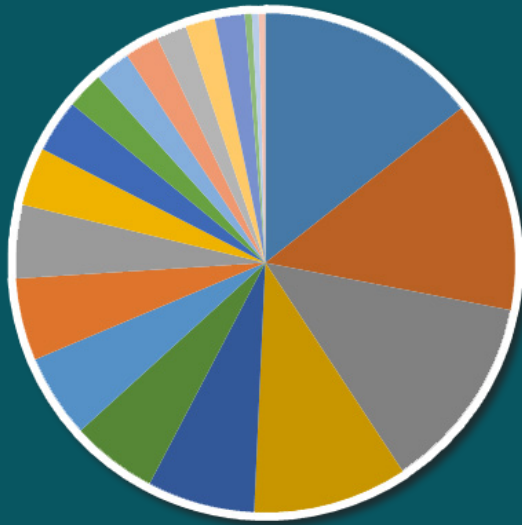
### Why organic ?

Based on a quest for autonomy, respect for how soils function and a will to preserve ecosystems, the production is certified "organic".

# PRODUCTION

Agricultural area : 220ha

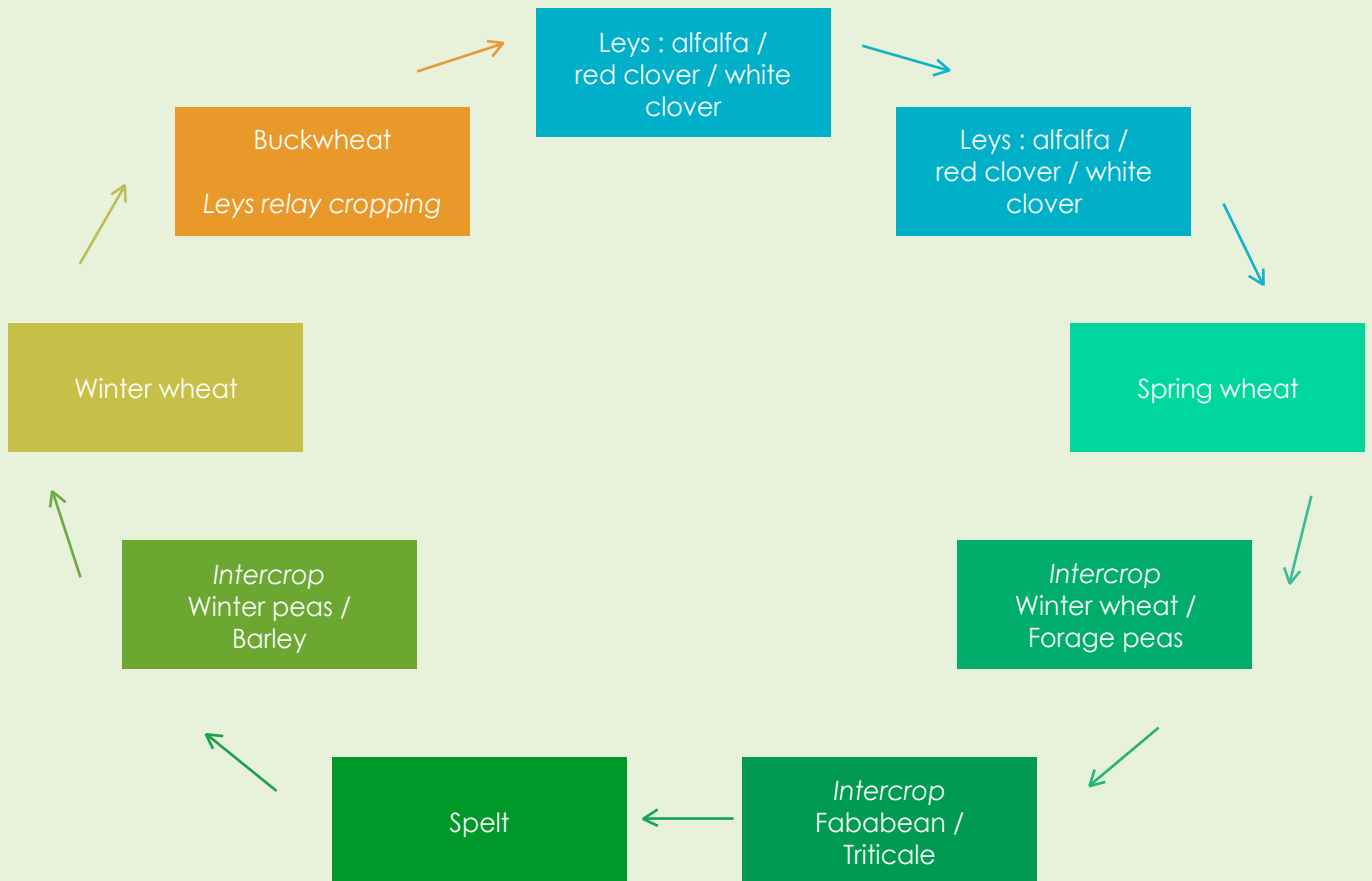
Crops : see figure



- Leys (red clover, white clover and alfalfa)
- Winter oat
- Winter wheat
- Buckwheat
- Winter faba bean
- Winter protein bean
- Heritage wheat population
- Rye for seed
- Winter protein pea for seed
- Spring wheat
- Winter barley for seed
- Fodder field pea
- Winter barley
- Spring protein pea
- Spring flax
- Lentils
- Spring barley
- Einkorn wheat
- Winter oilseed rape
- Spring spelt wheat

Note : all crops are cultivated in intercropping except the Rye production for seed.

## TYPICAL CROP ROTATION



## MARKET OUTLET

Ubios : seed production (1/3 of the production)

Cocebi : production for human consumption (1/3 of the production)

Neighbouring animal husbandry farm : leys, forage crops (1/3 of the production)

## THE SOIL - PH 6-6.5

The soils, located in a small agricultural region called "Puisaye", are very heterogeneous. Most of them have a limited potential for crop production: they are hydromorphic, shallow, heavy textured (silty clay), with a high content of flint-type stones (>25 %).

## WATER

No irrigation but artificial drainage on 2/3 of the area.  
Annual rainfall : 740mm

## DISTINCTIVE CHARACTERISTICS

### Strategy

Looking for autonomy for managing soil fertility : no organic fertilizers or manure but a biological strategy : crop diversity, covercropping, leys, intercropping.

Mechanical strategies (i.e., mechanical weeding, numerous false seed beds in between two mains crops) are very difficult because of the high content of stones in soils.

### Know-how

- ▶ Previous work in a research laboratory on the design of new organic cropping systems able to improve soil fertility
- ▶ Selection of cereal seeds adapted to my farm conditions
- ▶ Intercropping
- ▶ Covercropping
- ▶ Evaluating soil fertility by measurements of various indicators (earthworm abundance and biomass, chemical analysis...)

### Workforce

1,6 labour units (apprentice ; father and wife for high work season)

Inputs from Vincent Lefèvre, and Grégoire Rouyer (Ubios)  
Layout : ITAB  
Translation : Vincent Lefèvre (Ubios) and Stéphanie Klaedtke (ITAB)  
Edition : Frédéric Rey (ITAB)



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# LIVESEED FARM VISIT #3

STATION EXPÉRIMENTALE COCEBI

8, RUE DES GILLONS, LE DEFFAND - 89520 SAINTS-EN PUISAYE  
CONTACT - BÉRANGÈRE MILLOT TECHNICIEN2@COCEBI.FR

## TESTING

696 plots : 108 modalities (varieties) of wheat and 68 of barley, oat, triticale, rye, and spelt

## ORIGIN OF VARIETIES

- List defined by ITAB
- List defined by Cocebi and Ubios
- Varieties proposed by seeds companies
- New breeding lines, varieties under development (not yet registered)

## CHOICE CRITERIA

- Disease resistance
- Milling and baking quality
- Yield and protein content
- Closing cover (soil coverage) and plant height



## SEED TESTING PLATFORM COCEBI

### TESTING ORGANIZATION

#### BEFORE SOWING

- Randomization of testing with 4 repetitions

#### RATINGS

- Counting plants number
- Closing cover (soil coverage) and plant height
- Date of heading
- Diseases

#### HARVEST AND RESULTS

- Plots harvested one by one and bagging
- Analyses by Statbox software
- Interesting varieties will be sown again next year in testing platform
- Well performing varieties will enter in Biocer and Cocebi catalogue



Inputs from Bérangère MILLOT (COCEBI / Ubios)

This project received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N°727230.

GUARDS

Wheat varieties testing COCEBI 25 modalities

Wheat varieties testing ITAB 26 modalities

Triticale and rye varieties testing 23 modalities

Barley varieties testing 11 modalities

Oat varieties testing 9 modalities

Spelled varieties testing 19 modalities

Wheat varieties testing 12 modalities with a seed company named Lemaire-Deffontaines

Wheat varieties testing 24 modalities with research institute named INRA

Wheat varieties testing 21 modalities with a seed company named RaoulRolly

GUARDS



# LIVESEED

## VISIT #4

COCEBI  
89310 NITRY



La COCEBI est une coopérative agricole 100% biologique spécialisée dans les métiers du grain.

Coopérative pionnière sur ce marché, nous collectons, transformons et commercialisons depuis plus de 30 ans la production de nos agriculteurs sociétaires.

Basés à Nitry (89), nous nous approvisionnons dans l'ensemble de la Bourgogne ainsi que dans les régions limitrophes.

Nous effectuons un suivi personnalisé de nos adhérents et leur proposons un ensemble de services afin de répondre à leurs problématiques. Nous accompagnons également les agriculteurs au cours du processus de conversion à l'agriculture biologique.

COCEBI est engagée dans la production de semences certifiées biologiques, via notre marque Ubios, leader français de la semence certifiée biologique.



*Pilier du développement de l'agriculture biologique en Bourgogne, COCEBI propose une large gamme de produits :*

- *Des produits destinés à l'alimentation animale*
- *Des produits destinés à l'alimentation humaine*
- *Des céréales décortiquées*
- *Des semences certifiées biologiques*



### **COCEBI**

Sentier de la Fontaine, route de Noyers  
89 310 NITRY

(+33) 03 86 33 64 44

[secretariat@cocebi.fr](mailto:secretariat@cocebi.fr)

[www.cocebi.fr](http://www.cocebi.fr)



COCEBI is a farmers cooperative exclusively dealing with organic products and specialized in the grain business. COCEBI, a pioneer in this market, has existed for more than 30 years.

We collect cereals from our farmers in Burgundy and in neighbouring regions. We process them and sell them in France and neighbouring countries.

We offer personalized services to our members and we are able to adapt our services to their needs. We also advise farmers who are converting their farms to the organic method.

We produce certified organic seeds, through our brand Ubios, market leader in France.



*Cornerstone of the development of organic farming in Burgundy, COCEBI offers a wide range of products:*

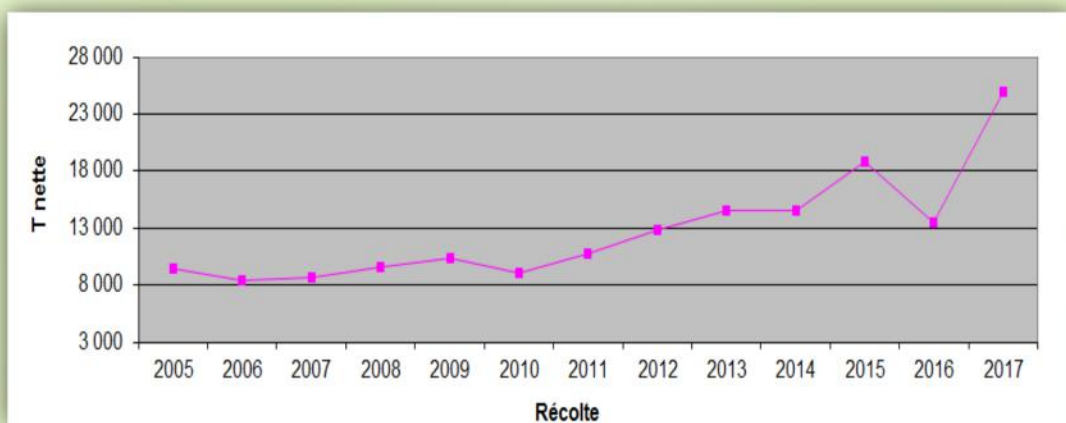
- *Products for animal feed*
- *Products for human consumption*
- *Hulled (husked) cereals*
- *Certified organic seeds*



## Notre histoire

### *Our history*

- Juillet 1983 : Création de la coopérative Cocebi par 7 agriculteurs bio de l'Yonne.
- 1988 : Installation du siège à Auxerre, stockages en ferme
- 1998 : Déménagement sur le site de Nitry ; début de l'activité production de semences certifiées
- 2010 : Doublement de la capacité de stockage
- 2011 : Acquisition de la station semences de Maise (91) et création de la marque Ubios
- 2013 : Partenariat de collecte bio avec Vivesvia et Seine-Yonne.
- 2014 : Création de Fermes Bio, union de commercialisation des coopératives 100% AB
- 2015 : Investissement séchoir et boisseaux
- 2017 : Investissement capacités de stockage à Nitry
  - *July 1983: Cocebi was founded by 7 organic farmers from Burgundy*
  - *1988: Cocebi moved to Auxerre. The grains were stored in farms*
  - *1998: Cocebi moved to Nitry (Yonne), its current location*
  - *2010: Storage capacity doubled*
  - *2011: Acquisition of the seed factory in Maise (south of Paris), creation of a brand for organic certified seeds: "Ubios".*
  - *2013: Partnership for collecting cereals with other cooperatives (Vivescia, Seine-Yonne).*
  - *2014: Partnership for sending our production with three other cooperatives exclusively dealing with organic product: Fermes Bio*
  - *2017: Increase of storage capacity*



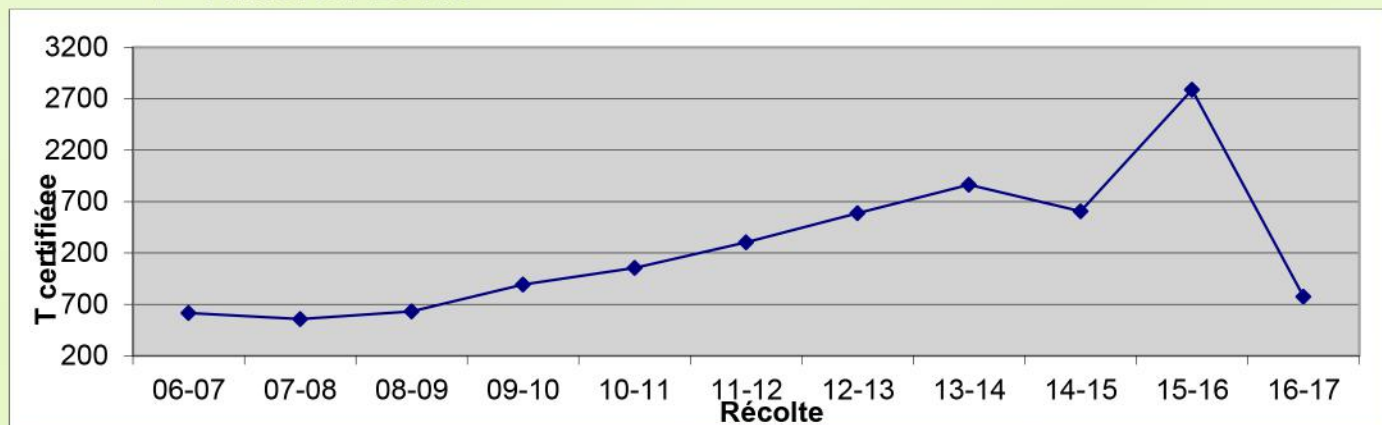
Evolution de la collecte depuis 2005  
*Evolution of grains collection by Cocebi since 2005*



# Cocebi en 2018

## Cocebi in 2018

- Zone de collecte : Bourgogne et départements limitrophes (10, 51, 52, 39, 18, 77, 03, 01)
- 200 adhérents producteurs
- Capacité de stockage : 15 000t, 4 silos de stockage
- 2 chaînes de triage du grain à Nitry (89)
- 16 salariés
- CA 15 M€
  - *Collection area: Burgundy, Champagne and neighboring regions*
  - *200 farmer members*
  - *Storage capacity: 15 000 tons, 4 silos*
  - *2 grain sorting lines in Nitry*
  - *16 employees*
  - *Turnover: 15 M€*



*Evolution de la production de semences (tonnes)*

*Evolution of the production of Certified seeds (tons)*







## Pôle alimentation animale *Feed division*

<b>Céréale</b>	<b>Cereal</b>
Avoine	Feed oats
Blé tendre	Feed wheat
Maïs	Corn silage (/feed)
Orge	Feed barley
Sarrasin	(Feed) buckwheat
Seigle	(Feed) rye
Triticale	Triticale
<b>Oléo protéagineux et autres</b>	<b>Oil seeds, pulses and others</b>
Balle d'épeautre granulée	Granulated spelt chaff (pellets)
Cameline	Camelina
Colza	Rapeseed
Féverole	Horse bean
Pois	(Feed) peas
Soja	Soya bean
Tournesol	Sunflower

*NB : Les céréales fourragères sont disponibles en Agriculture Biologique ou en C2.*



## Pôle alimentation humaine *Human consumption division*

<b>Céréale</b>	<b>Cereal</b>
Avoine blanche	White oat
Avoine en gruaux	Hulled oat / husked oat
Blé tendre meunier	Milling wheat
Blé panifiable	
Blé biscuitier	
Blé de force	
Blé à germer	
Blé à floconner	
Engrain (petit épeautre) décortiqué	Hulled (husked) einkorn / Hulled (husked) small spelt
Epeautre décortiqué	Hulled (husked) spelt
Orge de brasserie	Malting barley
Orge	Barley
Sarrasin meunier	Milling buckwheat
Seigle meunier	Milling rye
Seigle	Rye
Triticale	Triticale
<b>Oléoprotéagineux, légumes secs et autres</b>	<b>Oil seeds, pulses, dry vegetables and others</b>
Cameline	Camelina
Colza	Rapeseed
Lentilles noires (Beluga)	Black lentils (Beluga)
Lentilles vertes	Green lentils
Lentillons de Champagne	Lentils of Champagne
Lin brun	Brown flax (linseeds)

Lin doré	Golden flax (linseeds)
Graines de luzerne à germer	Alfalfa (lucerne) seeds
Pois cassés	Split peas
Pois verts	Green peas
Brisures de pois cassés	Broken split peas
Soja	Soya bean
Tournesol oléique	High oleic sunflower seeds

*NB : Selon les produits, plusieurs conditionnements sont disponibles :*

- *Vrac (par camion complet, jusqu'à 30T selon la législation en vigueur)*
- *Bigbag (1T)*
- *Sacs de 25kg, par palette entière*

*Pour les conditionnements plus petits, nous interroger.*

*Pour les produits transformés, nous interroger.*

*NB: Depending on the product, several packages are available:*

- *In bulk*
- *Bigbag (1T)*
- *Bags of 25kg, per pallet.*

*For smaller packages, do not hesitate to contact us.*

*For processed products, do not hesitate to contact us.*

## Pôle semences certifiées *Certified seeds division*

<i>Famille</i>	<i>Family</i>
Avoine (hiver/printemps)	Oat
Avoine blanche	White oat
Avoine noire	Black oat
Blé tendre	Wheat
Alternatif	
Hiver	
Printemps	
Epeautre	Spelt
Fèverole (hiver/printemps)	Horse bean
Lentilles vertes	Green lentils
Luzerne	Alfalfa (lucerne)
Orge (brassicole & fourragère)	Barley
Hiver	
Printemps	
Pois (hiver/printemps)	Peas
Fourrager	
Protéagineux	
Sarrasin	Buckwheat
Seigle	Rye
Triticale (hiver/printemps)	Triticale

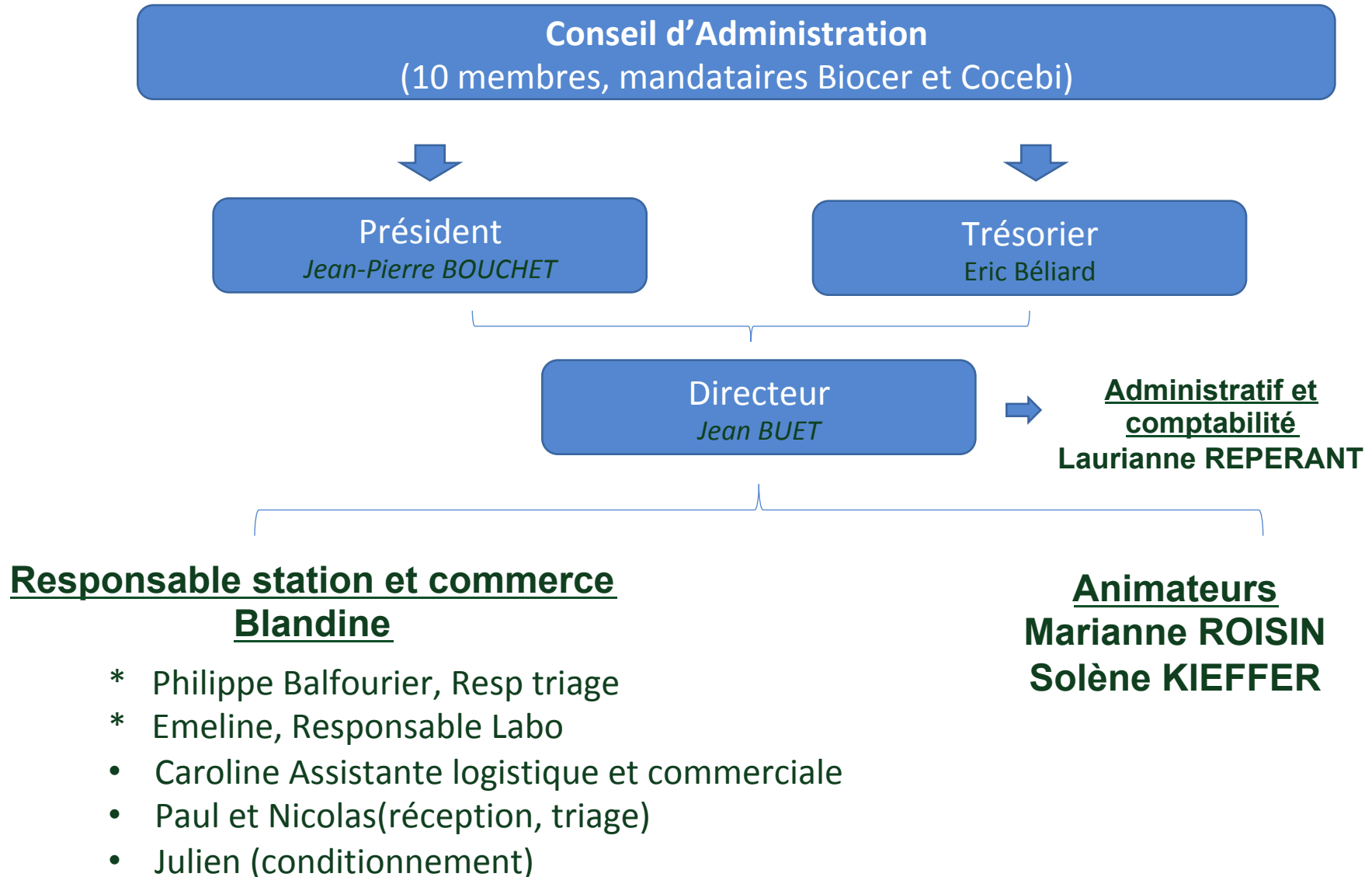
*NB : D'autres espèces disponibles ponctuellement, nous interroger pour toute demande concernant une espèce non citée.*

*NB: Other species available, do not hesitate to contact us for any seed not listed*





# Organigramme



# Production de semences

## La station de semences

### Capacité de stockage :

- 50 cellules pour 4600T
- 600 containers
- 4000m2 de stockage à pl



### Equipements

- 3 chaines de triage : épierreur, ébarbeur, séparateur, trieur alvéolaire, table densimétrique
- 1 trieur optique 1<sup>ère</sup> génération
- 2 chaines d'ensachage

# Production de semences

## Un suivi qualité des champs à la station

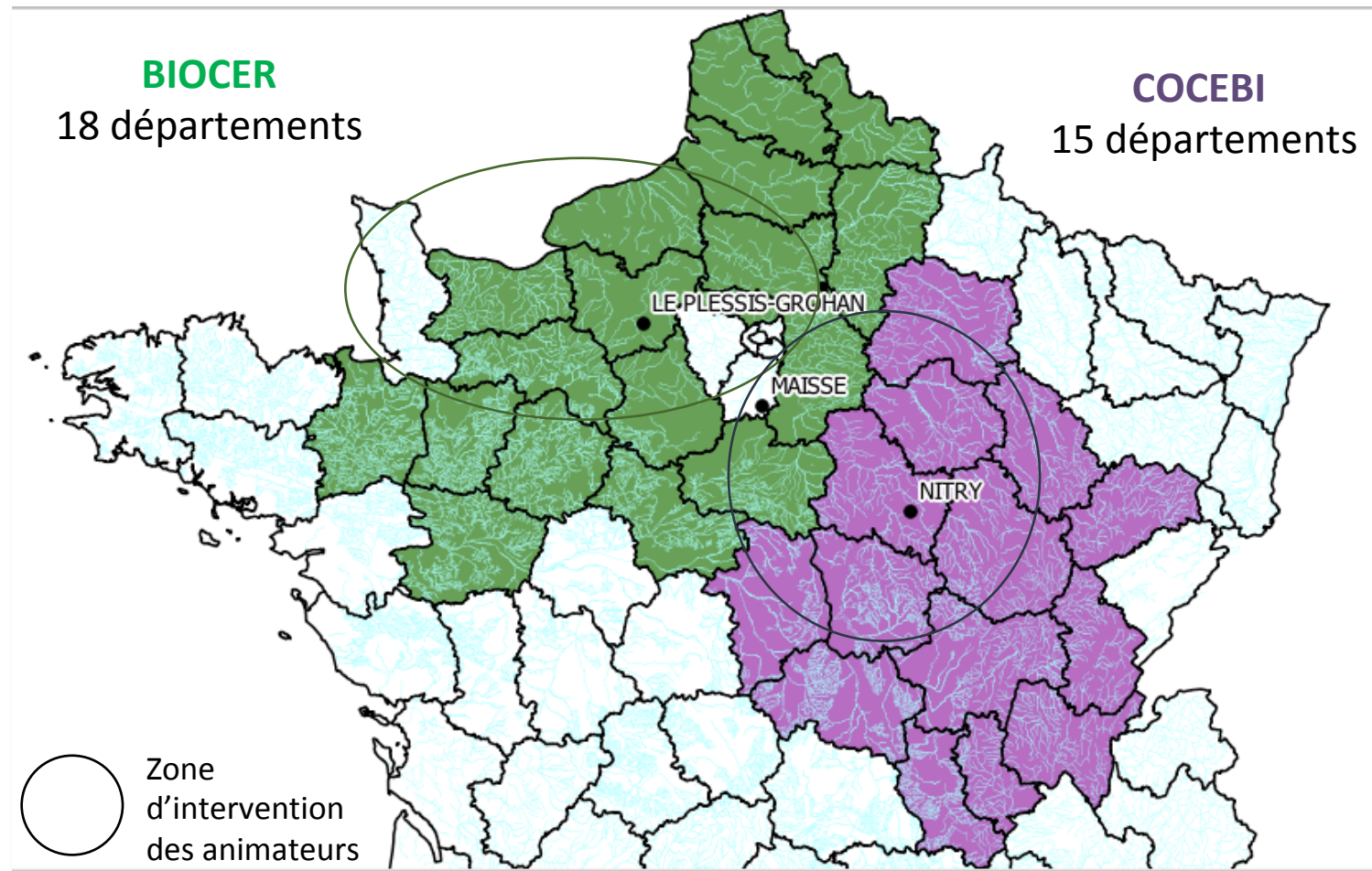
- Un suivi qualité rigoureux des agriculteurs-multiplicateurs formés et une station de semences performantes pour un résultat qualitatif supérieur à la norme : **Maximum une graine d'adventices pour 500 grammes et/ou 3 céréales étrangères.**



- **Pas de produits chimiques utilisés sur la station.** Recours au vinaigre blanc pour ses vertus fongiques, notamment pour la carie du blé.



# Les zones de collecte des coopératives



# Commercialisation

## Evolution des ventes d'automne sur 4 campagnes

