

BLEU-BLANC-COEUR

Building business opportunities by Innovation
with a natural Healthy agriculture

AGENDA



What is Bleu-Blanc-Coeur?



Development case studies in France & Belgium



Bleu-Blanc-Coeur eggs with extruded flax seed in practice with Noack group



Video presenting the BBC approach



Who are we?

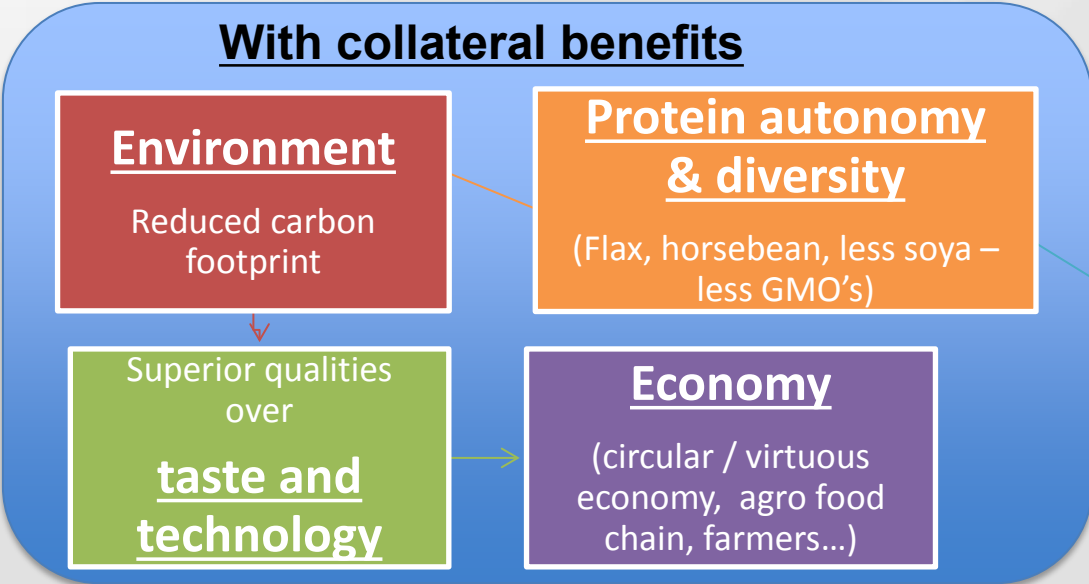
A World Organization:

9 countries with a BBC presence & 7 under-construction

An association
(8200 members: crop & animal farmers, processors, retailers, consumers, doctors and health specialists, chefs...)

With a clear objective:
IMPROVING FEED
(production methods, farms, feed)

Impacting on:
Animal Health
(increase of immunity, fertility, resistance to antibiotics...)



With a natural consequence on:
NUTRITION
(nutritional density improved in plates = health prevention & reduced inflammation)

2008
Signature of a nutritional charter under the **French National Program on Nutrition and Health**)

2009
The BBC trademark became an **alleging brand** in EU

2012
BBC is recognized by the UN as an official GHG approach

The Bleu-Blanc-Cœur approach



Adapted from Pr.Philippe Legrand

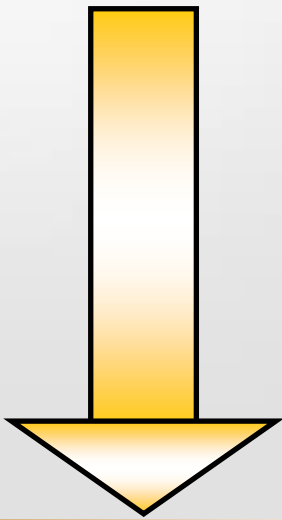
Nutritional founding principles

BALANCE => Ratio = 4/1

Omega 6



Omega 3



THE CHALLENGE: PREVENTION OF THE NON COMMUNICATION DISEASES

Leading to a preventive approach

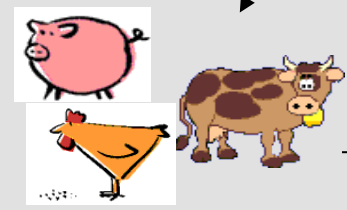
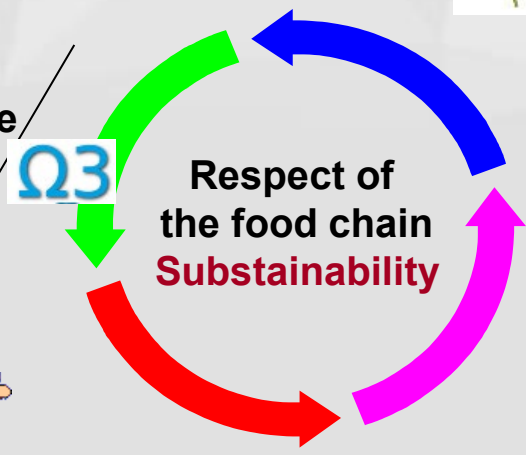
**Agronomy
More plant
diversity**



**Carbon foot print
improved**



Passage from the
Plant to the
animal



**Improvement
of animal health**

Natural passage from animal to
human



**Improvement
of human health**

➔ **Cardiovascular diseases, Cerebral functioning, Cancers (tumour growth)...**



Fight the new world pandemic => LOW GRADE INFLAMATORY DISEASE

- ▶ A layer fed with an Omega-3 rich diet will be able to metabolize a nutrient called «Cervonic acid » or DHA « Docosahexaenoic acid » which is one essential component of our brain, our eyes, our nervous tissue and drives a good function of the body.
 - ▶ The DHA is that important for the Human health, that it is sold in caps in the drugstore... whereas a layer well fed, is able to synthesize a significant amount. Depending of the diet raw material, it will be possible to bring ALA, EPA, DHA.
 - ▶ Since 1960, there are **7 times less Omega 3 PUFA inside the eggs**
=> That is a reason why there are more and more diseases of civilization such as obesity
- Today, European people are eating just 50% of there needs in **Omega 3 PUFA** (ab. 2,2g / days)
- ▶ But
 - to prevent the inflamation you also need to overview the ratio w6/w3
 - to prevent the hypercholesterolemia, you need also to reduce SFA « Saturated fatty
- This is why, Bleu-Blanc-Coeur eggs target a global nutritional egg's profil adapted to human needs


Who does what and how ?



Large experience to develop ecosystem which creates added-value in different context and part of the world

- Initiate a BBC ecosystem gathering local actors 
- Assess the local situation (technical and economical aspect, consumers expectations)
- Support the implementation of the specifications
- Measure the nutritional benefits
 - **Obligation of means:** diet specifications
 - **Obligations of Results** = food lipid profil (AGS, n-3, w6/w3, AGS/w3) « the memory over the production method that was used »
 - **Analytical control**
- Support the ecosystem 

Large know-how in science, technology, technical advices for farmers, quality measurements... in the field of animal lipids feeding

- Set up of zootechnical trials for species with the producers 
- Technico-economical analyses led under the country scope
- Provide technical advices to the farmers
- Provide BBC traced source of ALA (Extrulin®)

Bleu-Blanc-Coeur

- ✓ a brand to create a differentiated ecosystem
- ✓ a part of the solution to achieve the nutritional recommendation and improve the health situation of the society

The strength of a collaborative approach: 2 cases studies



6000 producteurs et éleveurs

800 entreprises adhérentes

Le poids des filières **1,7** milliard d'euros en 2017

5 études cliniques

370 publications scientifiques

Un soutien de **1500** professionnels de santé

1900 produits estampillés

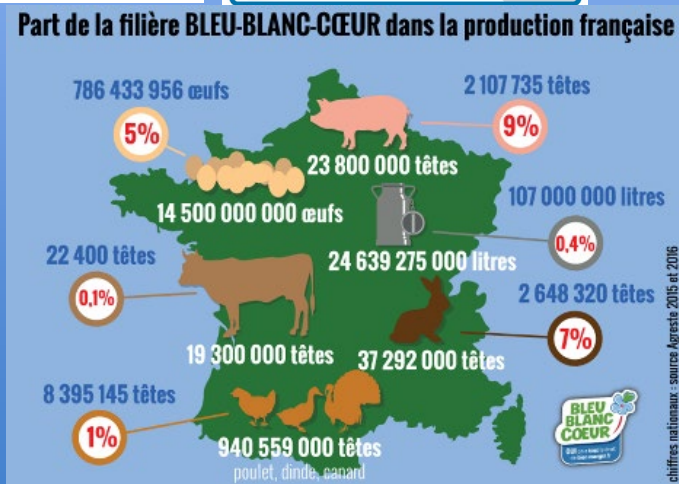
34% de notoriété + 26 points en 4 ans

Progression de l'activité **+13%** en 2017

900 millions d'œufs / an
7% de la production française

2 150 000 porcs Bleu-Blanc-Cœur / an
9 % de la production française

98,8% des Français ne couvrent pas leurs besoins alimentaires en Oméga 3



FRENCH Case study

BELGIUM Case study

200 producteurs et éleveurs

50 entreprises adhérentes

Un soutien de **100** professionnels de santé

Progression de l'activité **+27%** en 2017

32% de notoriété chez les acheteurs de viande Delhaize

20 Experts Scientifiques et Ambassadeurs

382000 porc Mieux Pour Tous/an
3,2% de la production belge

85 millions d'œufs / an
3,2% de la production belge

Plus de **360 résultats analytiques** (obligation de résultats) et **120 audits** pour 2017

Bleu-Blanc-Coeur eggs sector specifications



Obligation of means

The BBC eggs request obligation of level of polyunsaturated fatty acid (PUFA) in the diet

- The hens need to be fed during a transition period of at minimum 15 days, with the following requirements:

	ALA BBC (at least)	LA/ALA (at maximum)	IT3
FEED INTAKE	0.66%	2.5	3.6

- Maximum of 10% of GMO soya
- No animal fat

Obligations of results

5 analytical criteria composed the obligations of results:

	Standard Eggs	BBC Eggs			
		COMPLIANT		NON COMPLIANT	
% of total fatty acid	Current value	Targets	Limits	Out of limits	Comments
Omega 3	1.5	≥ 4.5	≥ 4	< 4	Rich in "good fat"
DHA	0.7	≥ 1.5	≥ 1.2	< 1.2	Rich in "good fat"
ALA	0.8	≥ 2.8	≥ 2.4	< 2.4	Rich in "good fat"
Omega 6/ Omega 3	15	≤ 4.5	≤ 5	> 5	Well balanced
AGS /Omega 3	23	≤ 7	≤ 10	> 10	Well balanced

Control: Analyze of the fat matter content with the fatty acid profile over the collected eggs

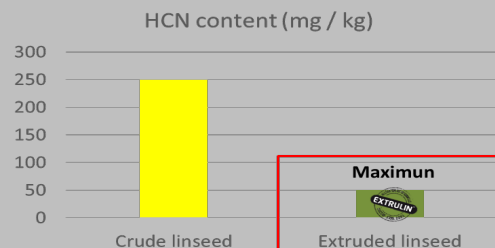
- At the packing station (exit of the candle machine):
1 per semester / farm (< 5 000 hens) or 1 per trimester / farm ([5 000 - 10 000] hens) or Each 2 months / farm (> 10 000 hens) or 1 per months / farm (> 50 000 hens)
- In the case, the farm has several sheds, it requests to switch the sample each analysis
- For each new farm, on analysis after the transition period (15 days of BBC feed before)

Get some BBC eggs with Extruded flax seed => EXTRULIN®



- **A traced flax seed coming from BBC ecosystem => non GMO linseed with high fat content and high level of Omega 3 PUFA**
- **100% extruded Product** (patented extrusion process) in a BBC member extruded company
- **Product** with many of guarantees:
 - Fat content (**25%**)
 - Fat digestibility (**80% minimum**)
 - Omega 3 content (**137 g/kg**)
 - Composition (60% Linseed + 40% Wheat Bran)
- **100% sustainable source of Fat and Protein**

An obligation of result in term of anti-nutritional factor reduction



Extrusion EXTRULIN® reduced the anti nutritional factor of linseed
Objectif < 20 ppm de HCN



Effect of the treatment on the fat digestibility



- ⇒ **Better digestibility and energetics value with EXTRULIN®**
- ⇒ **More Omega 3 available and so more sustainable**

Diet evolution



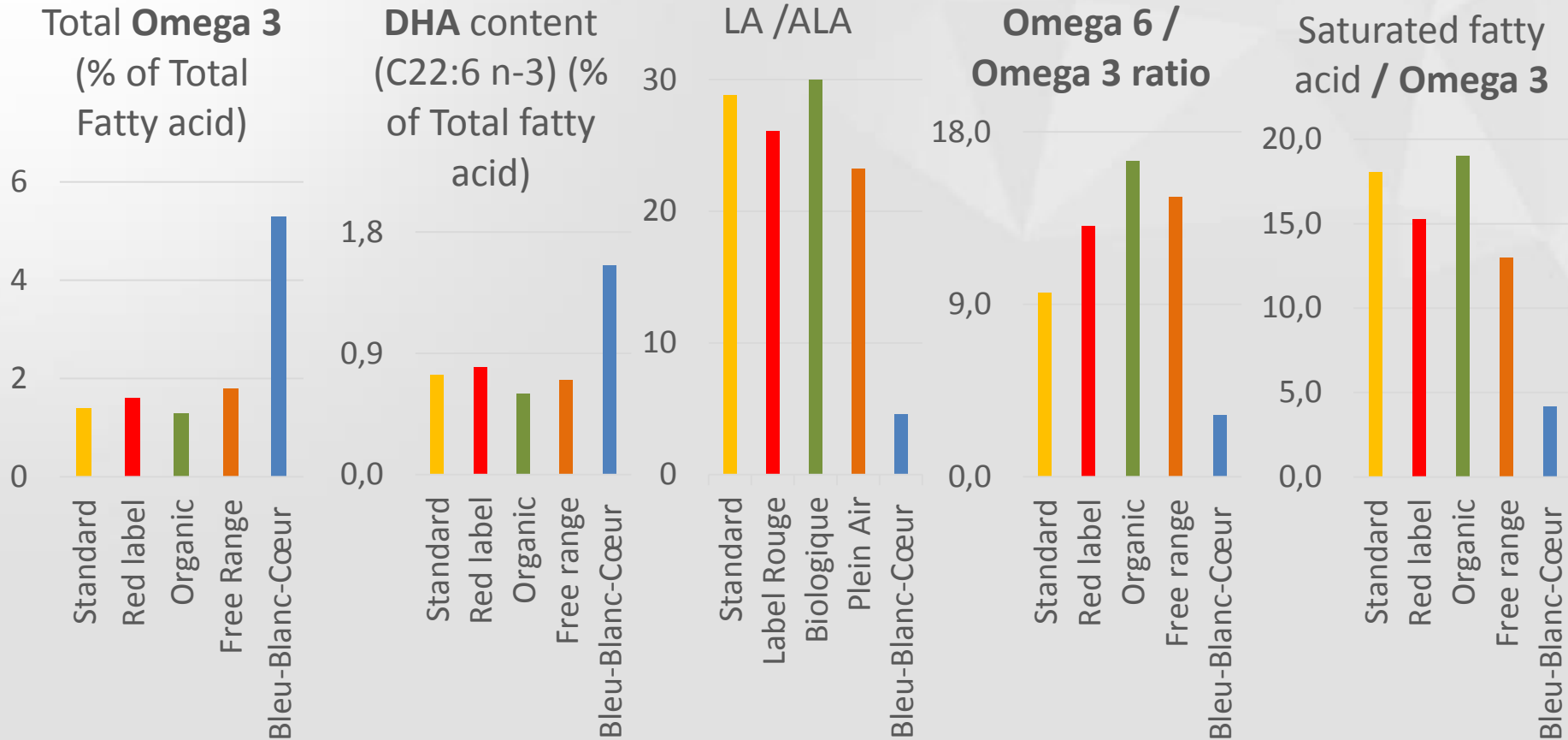
Raw material	Nyersanyag	Standard feed	BBC Feed
		kg	kg
Wheat	Búza 10,5	200,0	200,0
Mays	Kukorica 7	345,5	281,9
Mays gluten			19,9
Soy Bean 45,5	Szójadara 45,5	199,0	100,0
Extruded Linseed	EasyLin®		48,5
Oil (soybean)	Olaj	18,0	25,0
Sunflower meal	Napraforgódara 35/20	100,0	218,7
Sunflower	Napraforgó mag 15/46/15	30,0	
CaCO3 semolina	Takarmánymészkeő gríz 0,2-1	43,5	93,5
CaCO3 meal	Takarmánymészkeő dara 2-4	43,5	
MCP	MCP	10,0	1
Salt	Takarmány só	3,0	3
NaHCO3	Szódabikarbóna	1,5	3
Lysine-L	Lysine-L		1
DL-Methionin	DL-Metionin	1,0	1
Premix	Árutojó premix	5,0	5
		1 000	1 000
Price	Index 100	100	107
<i>Simulation</i>	<i>Ft/Ton</i>	68 284	72 884

Protein	Nyersfehérje	%	17,5
ME layer	ME baromfi	MJ/kg	11,3
Lipid	Nyerszsír	%	5,0
Fiber	Nyersrost	%	5,2
Ash	Nyershamu	%	13,3
Lizin	Lizin	%	0,8
Methionin	Methionin	%	0,4
Methionin+Cisztin	Meth+cisztin	%	0,7
	Treonin	%	0,7
	Triptofán	%	0,2
Digestibility Lizin	Lizin emészthető	%	0,7
Digestibility Methionin	Methionin emészthető	%	0,4
Digestibility Meth+Cisztin	Meth+cisztin emészthető	%	0,6
Digestibility Treonin	Treonin emészthető	%	0,6
	Ca	%	3,7
	P	%	0,6
Ca+phytaze	Ca +fitáz	%	3,8
P+phytaze	P +fitáz	%	0,8
Digestibility P	P hasznosítható	%	0,5
	Na	%	0,2
	Linolsav	%	2,6
	A vitamin	NE/kg	12 000,0
	D-3 vitamin	NE/kg	3 000,0
	E vitamin	mg/kg	30,0

=> Iso-energy / Iso-proteins / Iso-amino-acid

Which means a feed overcost of 0,6Ft /egg produced

Because they really have a better nutritional quality incontestable!

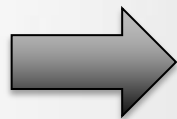




BBC EGG FOOD CHAIN: a collaborative economic model



Feed company



Egg packing center



Distributor (eg supermarket, shop, grocery...)

Annual membership	1 000 € / year
Charges	0,80 €/MT of feed sold as "BBC" <i>(reduction according to tonnage if over 20,000 MT / year)</i>
Analyses*	100 € / analyse (1 to 4 times / year according to tonnage)
Follow-up audits	305 € (max.) / 18 months

Bonds:
 - Get "BBC" feed formulas validated at least once a year
 - Transmit quarterly product accounting (eg flax volumes received, feed volumes delivered in breedings, ...)

Annual membership	1 000 € / year
Charges	0,50 €/1 000 eggs sold as "BBC"
Analyses*	100 € / analyse (2 to 6 times / year / breeding facility according to the size)
Follow-up audits	305 € (max.) / 18 months

Bonds :
 - Transmit quarterly product accounting (eg amount of BBC eggs produced, amount of BBC eggs sold as "BBC", ...)

Membership only if sold under distributor's own brand

Annual membership	1 000 € / year
Charges	Annual fee based on number of private label products sold with "BBC" logo (between 3,000 and 10,000 euros)

Bonds :
 - Transmit quarterly product accounting (eg amount of BBC eggs bought from packing center, amount of eggs sold as "BBC", ...)

* (GC)Analyses are to be made in a laboratory registered by BBC (see analysis manual).
 It is possible to get a laboratory referenced in your country, it has to undergo ring tests as a first step.

Which means a BBC scheme overcost of 0,32Ft /egg produced

To sum up BBC = A 3rd way to build an healthy agriculture



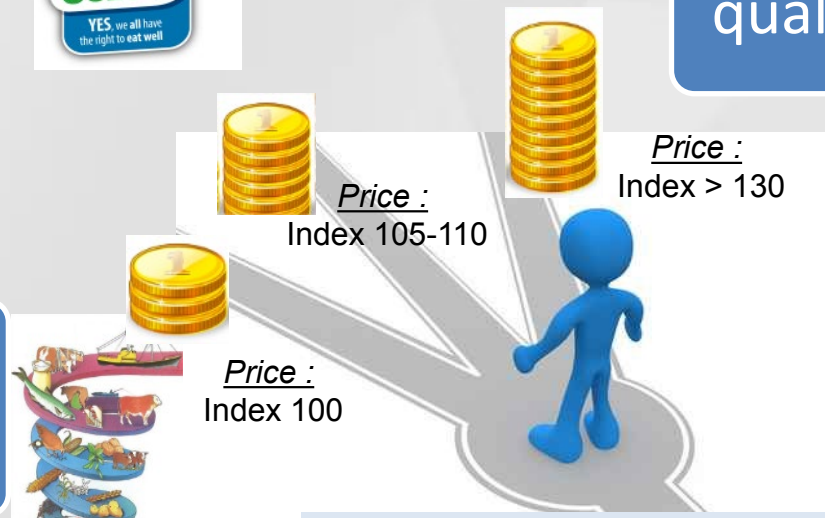
BBC has « invented » and « develop » the Sustainable Food following the FAO's definition :

- **Nutritionally adapted;**
- **Environmentally better;**
- **Culturally acceptable**



Official quality labels

Standard agriculture



With BBC => No more than 5 to 10% over extra-cost

Which means an extra cost of 0,92Ft/ BBC egg sold
⇒ In case of a standard egg sold in store 49Ft, it means:

- + 1,9 % for a BBC eggs (before farmer bonus)
- 227Ft per capita per year (247 eggs per capita)

Bleu-Blanc-Coeur in the word

- @ an approach to raise the countries agriculture level
- @ a tool to measure the food quality results
- @ a model part of the global public health challenge