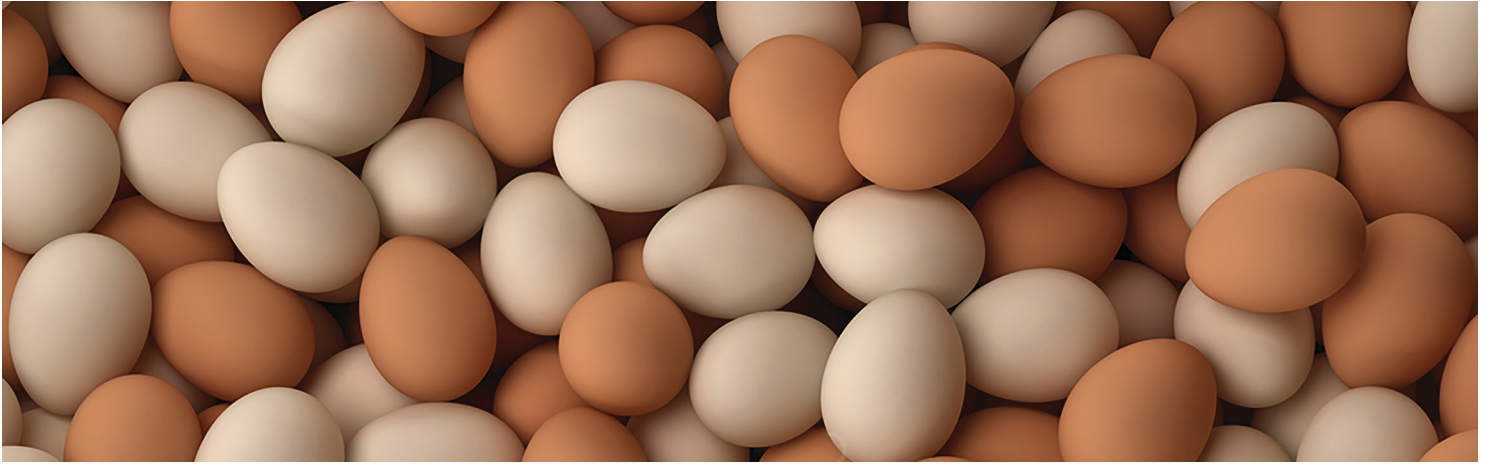
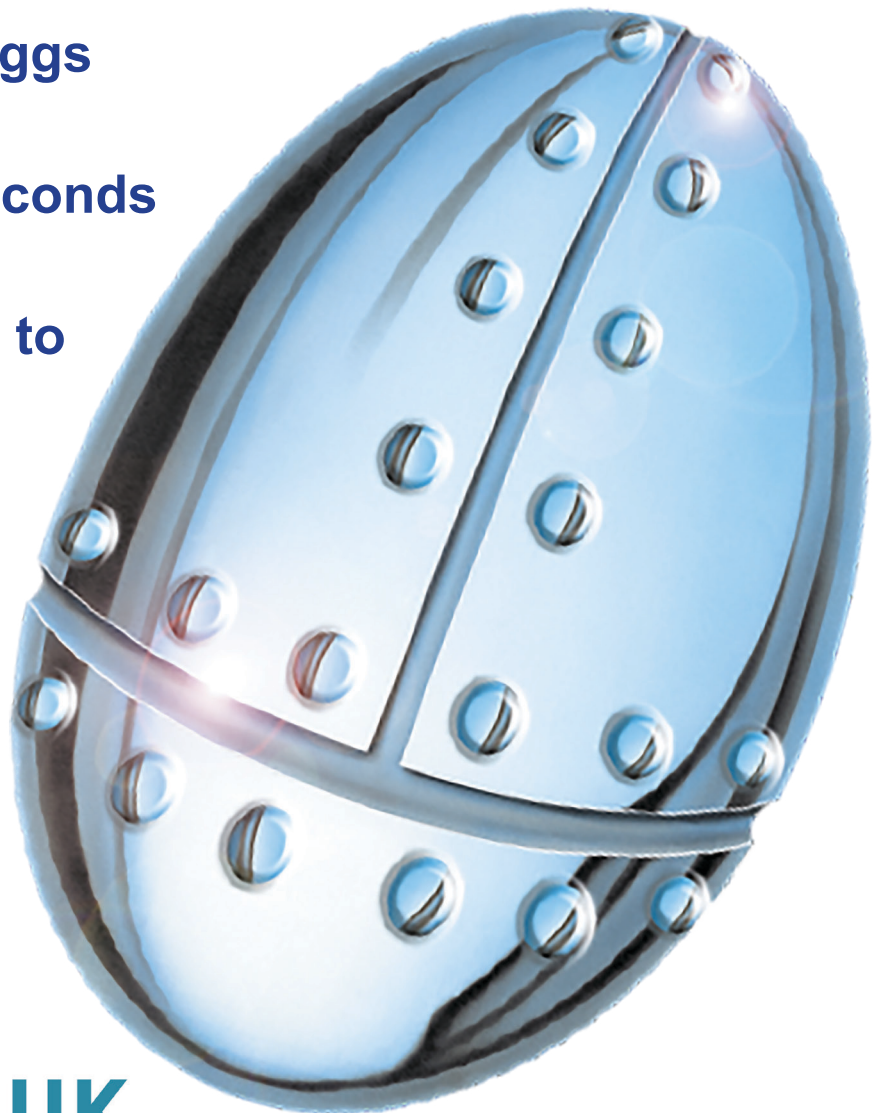


PIDOLin[®] PCa

The go-to product for eggshell quality during late lay



-  **2% Extra collected eggs**
-  **20% Reduction in seconds**
-  **Extends flock life up to 80 weeks**
-  **Reduces mortality**
-  **Less than 1p cost per pullet when fed in rear**



Calcium pidolate for poultry – how does it work in rear and late lay?

Calcium pidolate was originally developed to treat osteoporosis in humans. The main symptom of osteoporosis is depletion of collagen in bones, making them brittle and prone to fracture.

French company Dietaxion identified calcium pidolate as a treatment for deficiencies in eggshell quality over 20 years ago, and have been successfully selling their brand **PIDOLin PCa®** worldwide ever since.

Problems with poor eggshell quality have traditionally been addressed by adding various calcium sources to the diet, but this does not tackle the root of the problem.



But is in fact the quality of the egg membrane that dictates the integrity of the shell deposited around it.

The principal constituent of the membrane is collagen. When the laying hen grows older, it becomes less efficient at synthesising collagen of the optimal quality. This results in a thinner membrane, less capable of supporting the eggshell.

The eggshells of older birds are thus inherently weaker, leading to a significant increase in seconds.

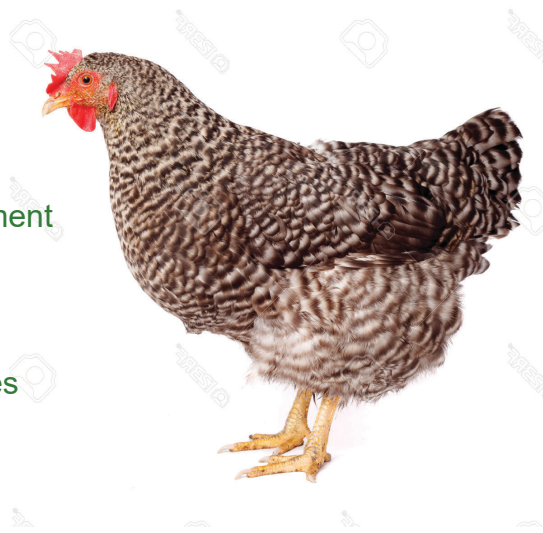
The calcium-binding protein in **PIDOLin PCa®** facilitates the absorption of calcium sources in the diet into the blood and then into bones. It then mobilises calcium from the medullar bone into eggshell formation.

Feeding **PIDOLin PCa®** from week 50 (or when seconds start to increase) can reduce seconds by more than 20% and usually increases collectable eggs by 1–2%.

When fed in rear, for the first 28 days of life, better bone development and muscle laydown is observed, with significant improvement in uniformity and reduction in mortality.

This early treatment, costing **less than 1p per pullet**, also reduces problems with eggshell quality in late lay and extends flock life.

Returns are usually greater than 2:1 against cost.



**PIDOLin PCa® is available from your feed supplier or pullet rearer.
Or call Greg Dunn on 01206 381521 or 07801 308054**



Pidolin PCa and Sweden



- **Layers and Poultry in Sweden**
- **The feed market and structure**
- **Feeding programmes with
Pidolin PCa**
- **Tests and effect of Pidolin Pca
in layers, breeders and broilers**

Lars Pettersson

Product Manager Poultry Feed

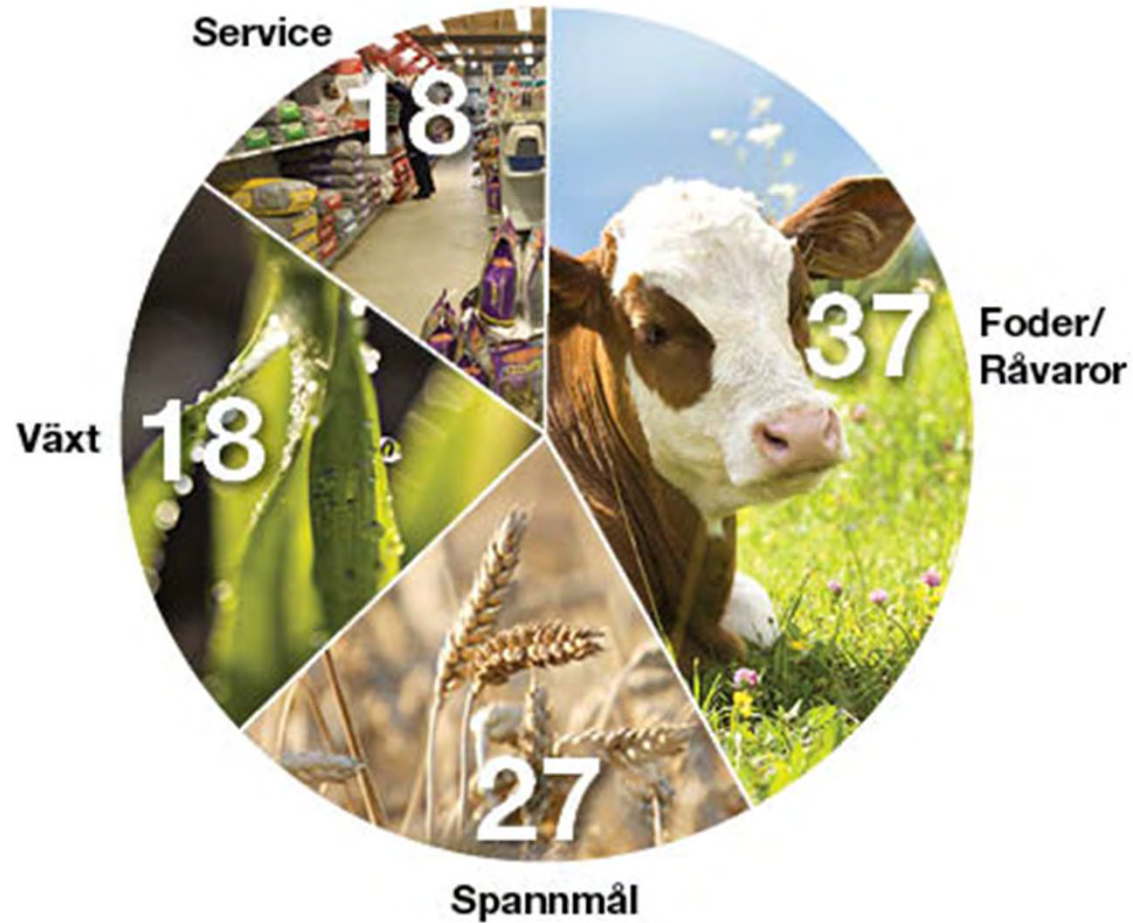
lars.pettersson@svenskafoder.se

Ph +46 510 82824

Numbers of Poultry in Sweden

- Pullets 2-2,5 million, layers 6,5-7 million.
- 80 million Broilers slaughtered a year at around 2 kg liveweight. Consumption of broiler meat totals almost 180 mill kg in 2012, meaning 18,3 kg per capita in Sweden.
- Around 0,6 million breeders.
- Turkeys 0,5 million slaughtered a year.

Svenska Foders turnover (4 450 mill SEK 2012) in business areas



Feed areas

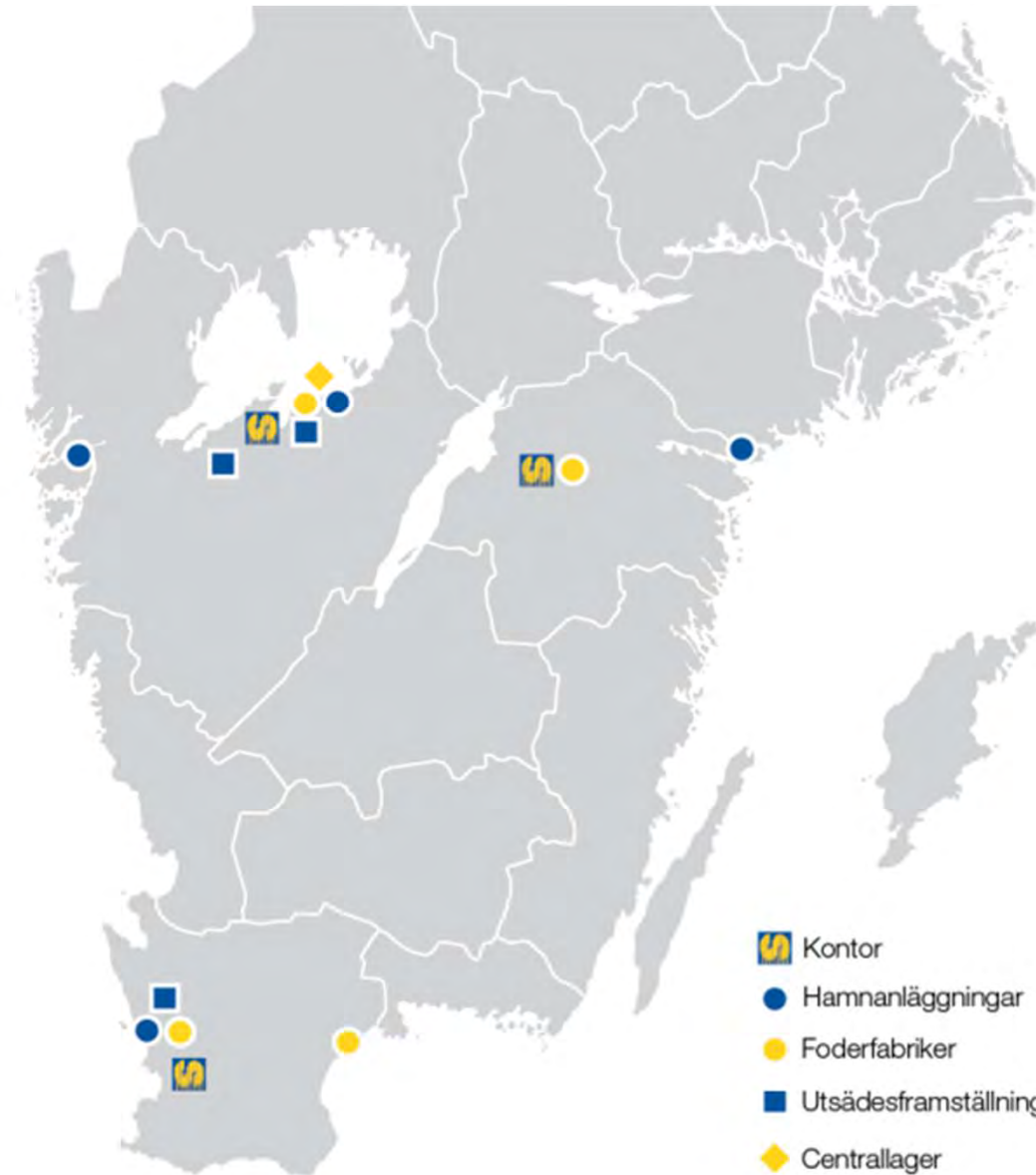


Well composed and nutritious feed!
For ruminants, poultry (pullets, layers, broilers, breeders and turkey), lamb, pigs and horses

Poultry feed at Svenska Foder

- Svenska Foder produces in total 500 – 550 thousand tonnes of feed per year. Makes 25 % of feed production in Sweden.
- Poultry feed makes a good 200 thousand tonnes (around 40 % of Svenska Foder).
- Market share on poultry feed around 40 % with slightly more on broiler (50 %) and turkey feed, slightly less on layer feed (30 %).
- Main competitor Co-ops Svenska Lantmännen and Kalmar Lantmän.

Här finns vi



Pidolin PCa and Svenska Foder

- Introduced in **layer feed**, phase 3 feed. October this year. Examples and comments.
- Used in **broiler breeder feed**, phase 2+ or 3. For Ross breeders since February 2012.
- For Cobb breeders since May 2011. Testresults.
- Used in **broiler feed** for Cobb broilers since September 2011. Improvements. Comparisons.



Old simple programme

Feeding programme in barn for Bovans Robust

	Foder	Liv Växt Bovan	Värp Aktiv	Värp Optimal Plus
	Art.nr	48111	49246	49278
Bovans Robust	Foderkons, g/h/d		105 - 120	Up to 120
	Levande vikt, g/h			Min 1700
Uppdat 2012-10-31	Äggvikt, gram		Up to 62	Over 60
	Äggmassa, gr/h/d		Up to 59	Over 56
	Ålder, veckor	15 - 17	18 - 32/35	32/35 - end

Consider mainly eggproduction (egg mass) and feed consumption at change of feed.

Laying period is started with **Värp Aktiv** and used uring phase 1 to a stabel and high production level with eggweight is up to 62 gram. Hens should have reached 1700 grams before change of feed.

Värp Optimal Plus is used during the main production phase when intensity is high and eggweight is slightly increasing.





New with PCa in Final Plus

Feeding programme in barn for Bovans Robust

	Feed name	Liv Växt Bovan	Värp Aktiv	Värp Optimal Plus	Värp Final Plus
	Art.nr	48111	49246	49278	49280
Bovans Robust	Feedconsumption, gr/h/d		105 - 120	Up to 120	More than 115
	Liveweight, gr/hen			Min 1700	
Update 2013-10-01	Eggweight, gram		Up to 62	Over 60	Over 64
	Eggmass, gr/h/d		Up to 59	Over 56	Up to 56
	Age, weeks	15 - 17	18 - 32/35	32/35 - 50/60	50/60 forward

Consider mainly eggproduction (egg mass) and feed consumption at change of feed.

Laying period is started with **Värp Aktiv** and used uring phase 1 to a stabel and high production level with eggweight is up to 62 gram. Hens should have reached 1700 grams before change of feed.

Värp Optimal Plus is used during the main production phase when intensity is high and eggweight is slightly increasing. Change to **Värp Final Plus** when eggshells need to be better.

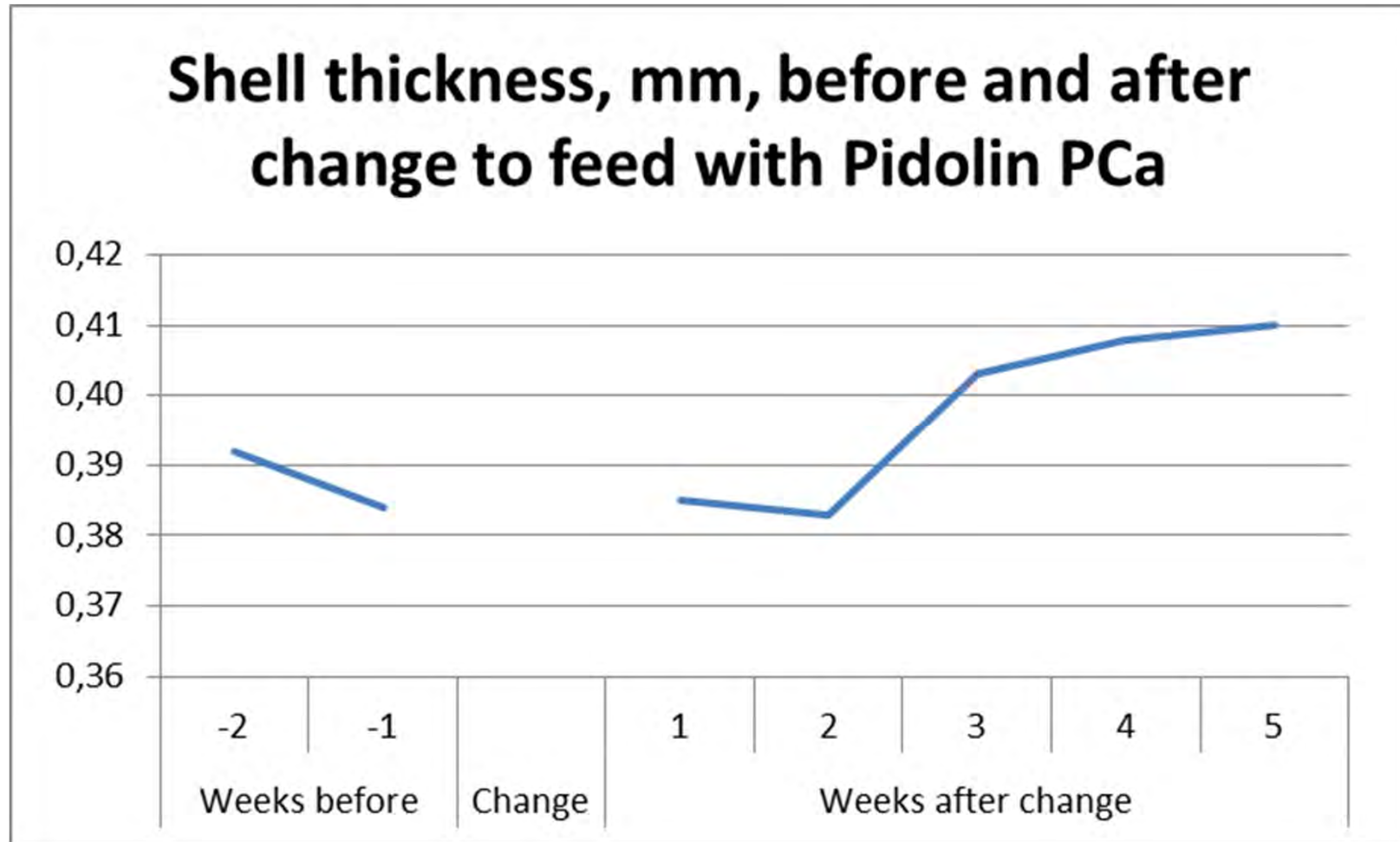
Värp Final Plus is used during the end production period when the need for better eggshell quality is obvious.

Shell thickness for broiler breeder

Weeks Before/after	Shell thickness, mm	CV %
-2	0,392	4,1
-1	0,384	4,9
Change		
+1	0,385	5,4
+2	0,383	7,6
+3	0,403	3,1
+4	0,408	5,8
+5	0,410	8,0

Table. Shell thickness two weeks before and five weeks after change to feed containing Pidolin PCa 300 mg/kg.

Shell thickness for broiler breeder



Essentials: Good Production and Uniformity

How to check this

- Number of flocks, houses and farms to see the variation, test different things and make conclusions – we do not have those possibilities
- Created the "Tuppen" performance and documentation procedure for farmers, slaughterhouses, hatcheries and feed companies to get good data
- Tuppen: Two hybrids, three hatcheries, four slaughter facilities, seven feed mills and 120 farms.

Pidolin PCa on broilers – Does it work

- Use: For Cobb broilers in first two feed; Cobb Starter 0-9 days, 300 mg/kg; Cobb Ett 10-17 days, 200 mg/kg.
- Difficult to judge and compare, but our market share on Cobb bird in "our area" has gone up from 60 % to 90 % this year.
- Weight of Cobb birds on our feed is almost as good as Ross birds.
- Problems with bones during first and second week is clearly lower. Is it lower 7dw or better bone mineralisation? Anyway we see less problems with bones.



**SVENSKA
FODER**

För att skörda framgång

Sofiprotéol's group

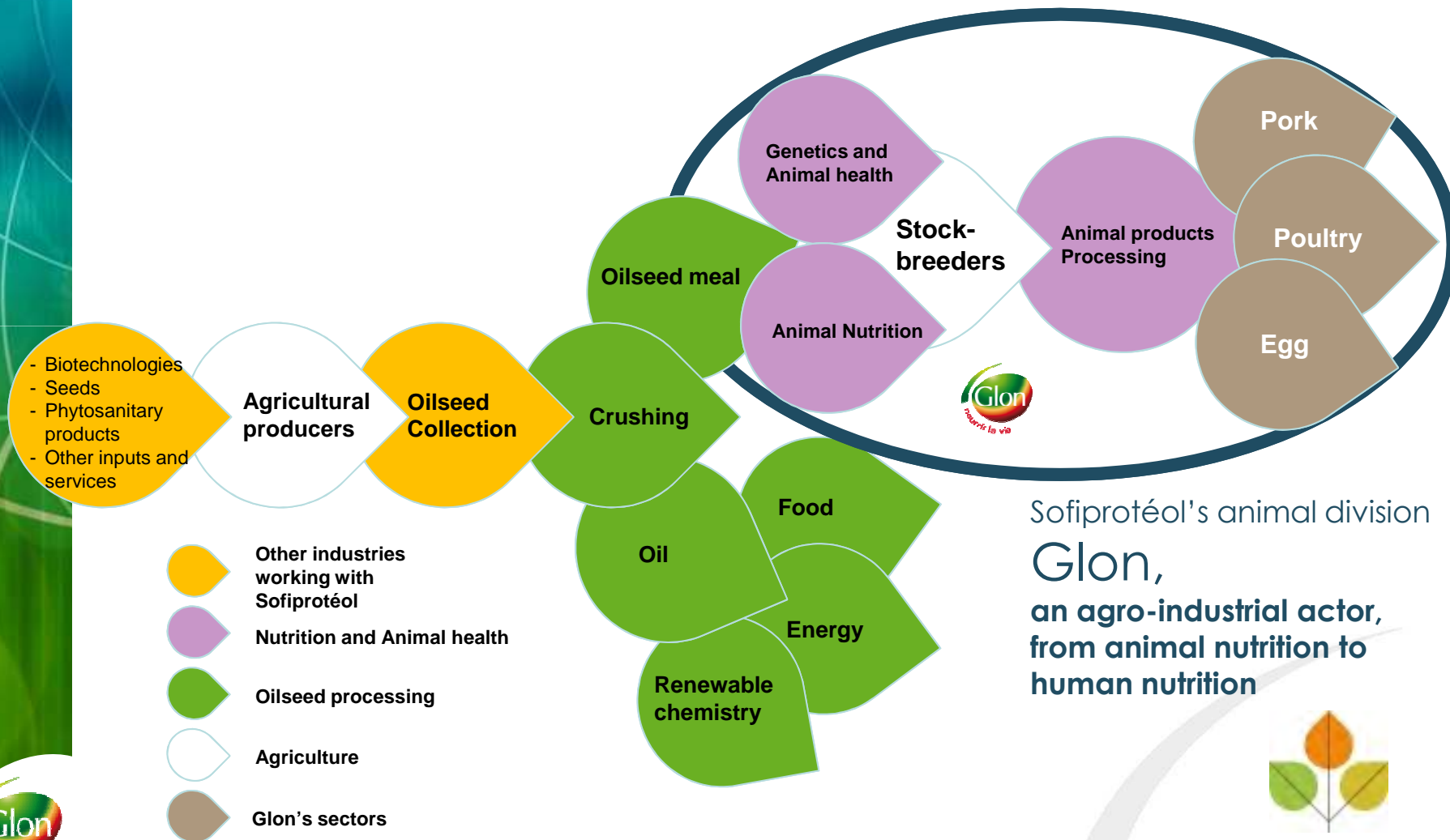




Sofiprotéol,
l'engagement durable

Organised sector

covering the whole chain from agriculture through to industry



Sofiprotéol's animal division

Glou,
an agro-industrial actor,
from animal nutrition to
human nutrition





Glon,
an agri-food company
from the consumer to the producer





Glon, Sofiproteol's animal division

an agro-industrial actor, from animal nutrition to human nutrition

1 driving motivation

Conceive,
produce and
market, using safe
and sustainable
methods, quality
food available to
the largest
number.

3 business fields



3 values

Entrepreneurial spirit



Strong local
presence



Human adventure





3 business fields



Food products

Branch
POULTRY



Branch
EGG



Branch
PORK



Branch
FARMOR



Animal production and nutrition

Branch



Branch

SOPRAL



Animal health and nutritional specialities

Branch



Branch



Branch





Key figures

Investments

55

Million €

4163

collaborators

present on
4 continents
and in **98** countries
via international
plant installations
and partnerships

Turnover

1,813

Billion €

56%

in animal
production
and nutrition

6%

In animal health
and nutritional
specialities

38%

in food products

N° 1

Animal feed with
brand



And shell eggs with



26 000 partner
breeders

3 successful specialised
sectors of production

49 industrial sites in
France and
worldwide



Consolidated figures from 2012





An agro-industrial actor

within animal sectors

3 sectors organised
from animal nutrition to
human nutrition



**Glon pork
industry N° 6***



**Glon egg
industry N° 1***



**Glon poultry
industry N° 4***

* In volume



Glon industries
contribute to producing in
France :

1 in 5
cow

1 in 8
poultry

1 in 4
rabbit



1 in 8
pig

1 in 5
egg



HUMAN NUTRITION



Glou egg production

Human resources: 470 employees - 8 companies

Animal feed

10,5 million laying hens fed with Sanders feed in 2011

EGG team

OV team

Animal farming and production

- 110 independent animal farmers for 5 million laying hens
- 10 laying farms for 1,1 million laying hens



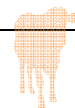
Distribution

2,2 billion eggs and egg products sold on the market

Share of the market

1 out of 4 eggs sold on the French market

The European leader in table eggs

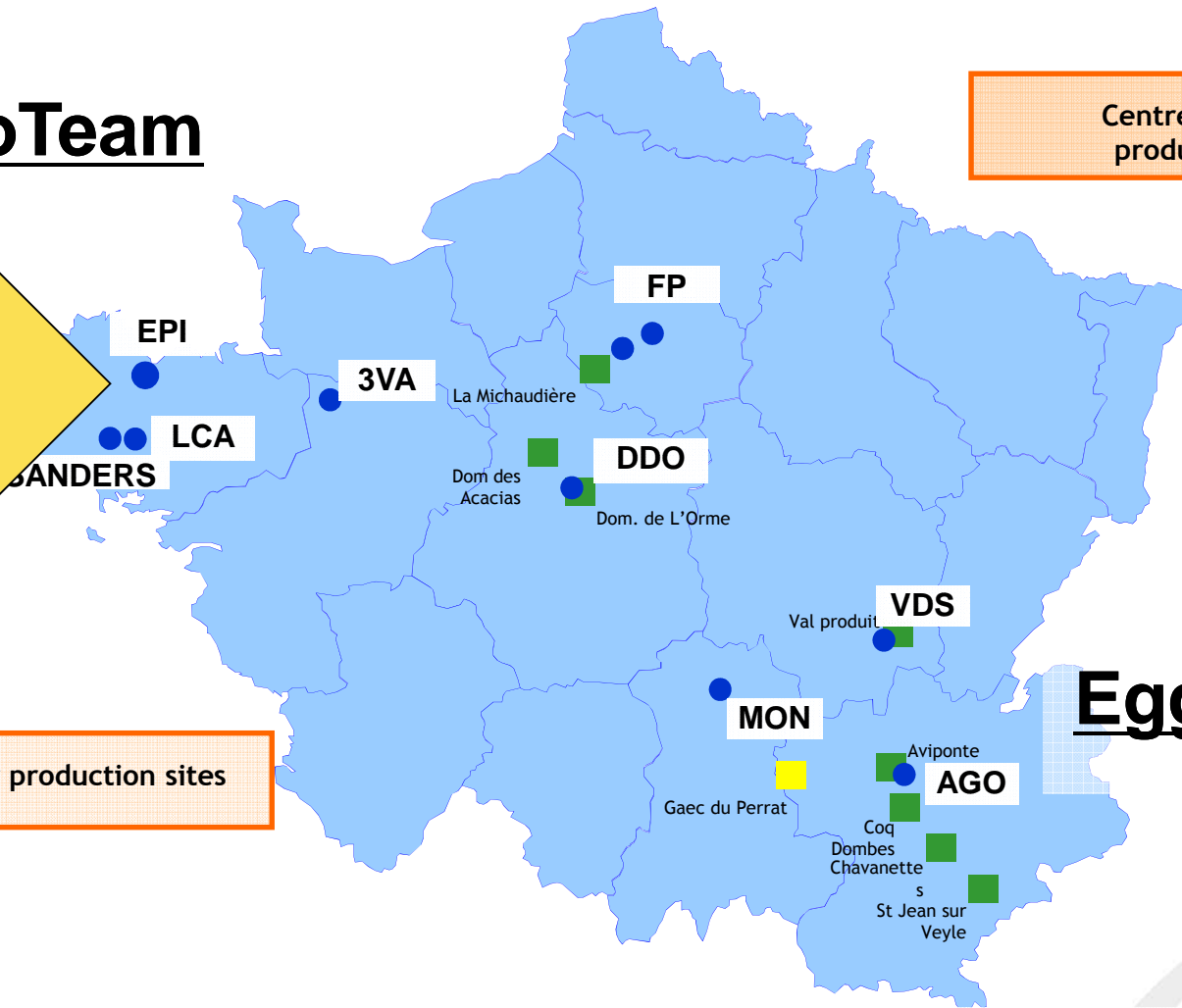


Where we are...

OvoTeam

Centre and Rhône production sites

200 contracted Farms
- 60 Pullet farms
- 55 Std egg farms
- 20 Free Range egg farms



Brittany production sites

EggTeam

- Ovoteam laying farms
- Processing and marketing



Pondicoq and Calcium Pidolate



Pondicoq®

- **We use Calcium Pidolate as a component of a feed additive called PONDICOQ®**

- **The goals of this feed additive are :**
 - **To reduce broken eggs**
 - **To maintain eggshell strength**
 - **To have more homogeneously colored eggshell****In order to sell more eggs**

- **These eggshell problems especially occurs at the end of the laying period, when hens grow old, because of:**
 - **Bigger eggs**
 - **Reduction of the calcium absorption efficiency**
 - **Less efficient oviduct**



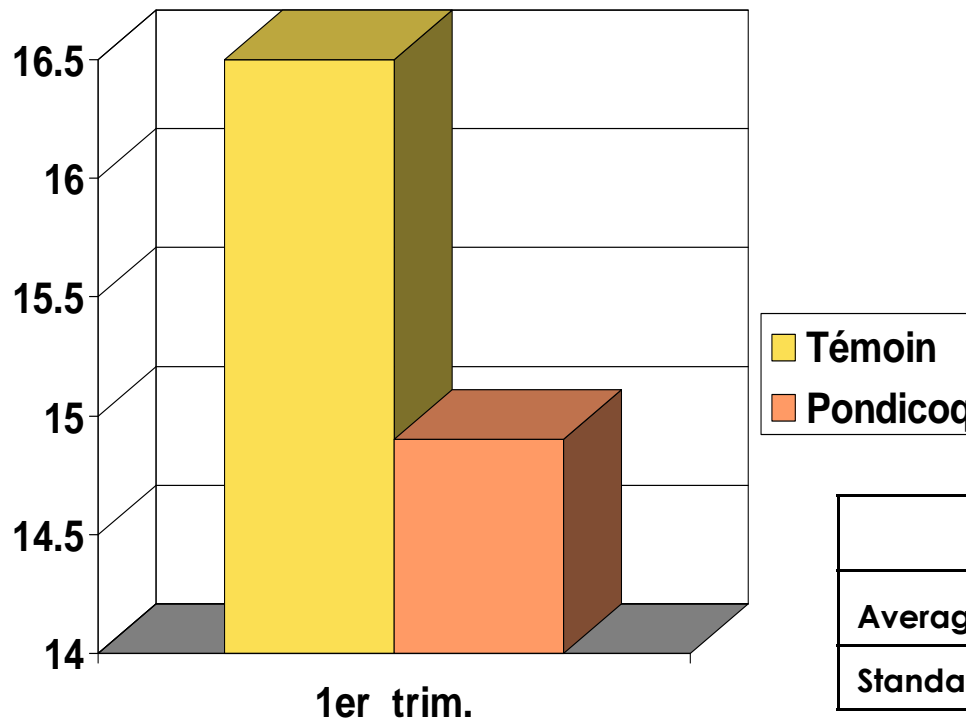
Why is Pidolate useful for us ?

- Because it helps the formation of eggshell thanks to calcium deposition
- It improves the eggshell color



Trial in Sourches : Pondicoq[®]

- Action on Broken + Dirty + Soft eggs



	CONTROL	PONDICOQ
Average	16.5	14.9
Standart deviation	16	13

→ Less broken eggs, better homogeneity



Trial in Sourches : Calcium Pidolate

- Experimental Design

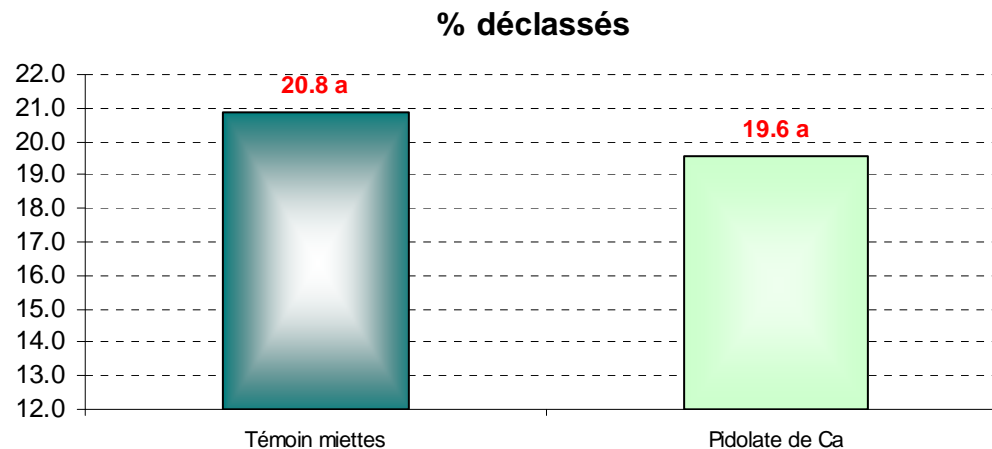
Isabrown layers, 74-81 weeks of age

2 x 44 cages of 2 hens

Control vs 600 ppm Calcium Pidolate during 4 weeks and 900 ppm Calcium Pidolate during the 3 last weeks



- Results

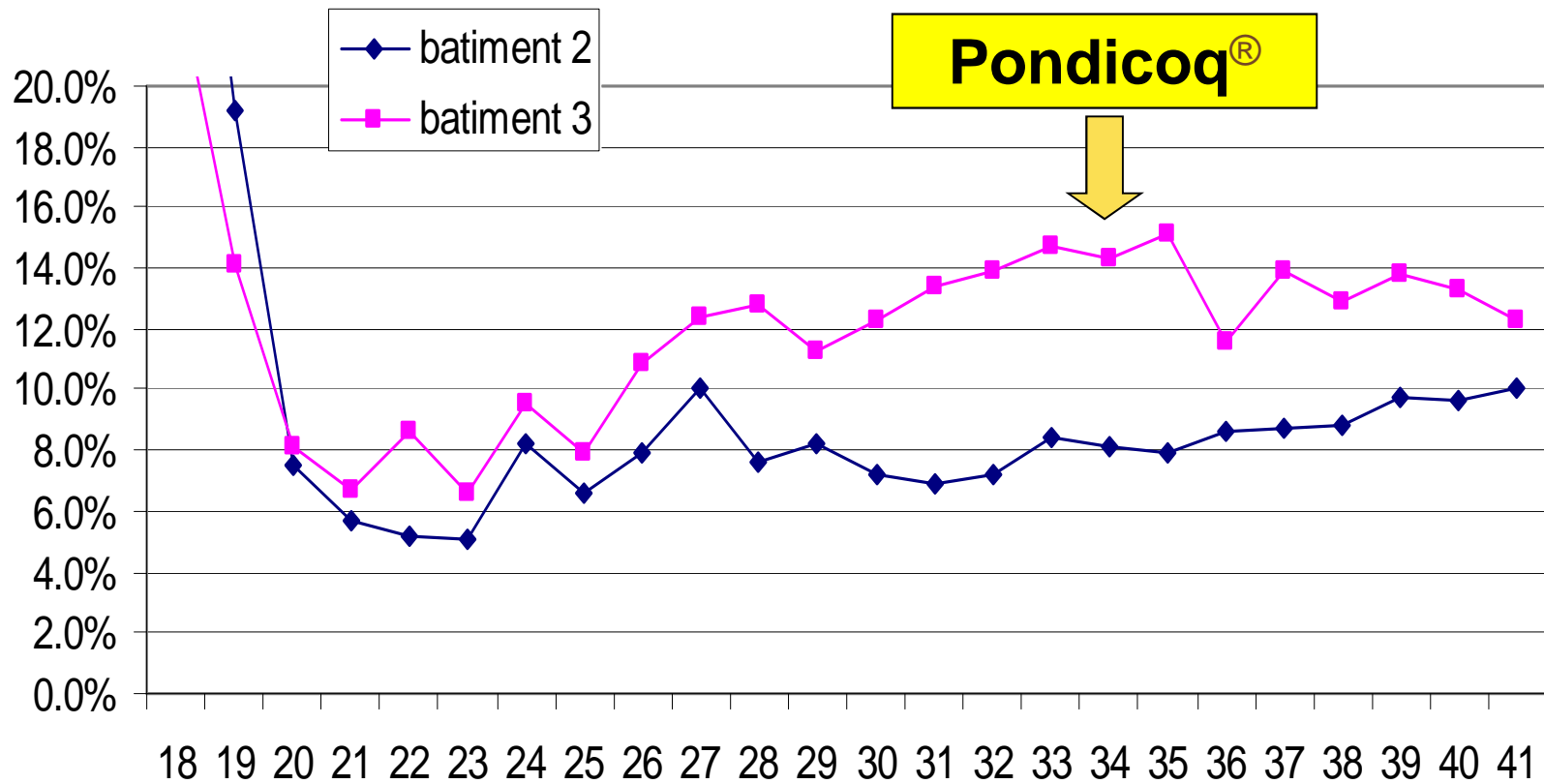


→ Tendency to less broken and soft eggs



Trial in commercial farm : Pondicoq®

% déclassés totaux



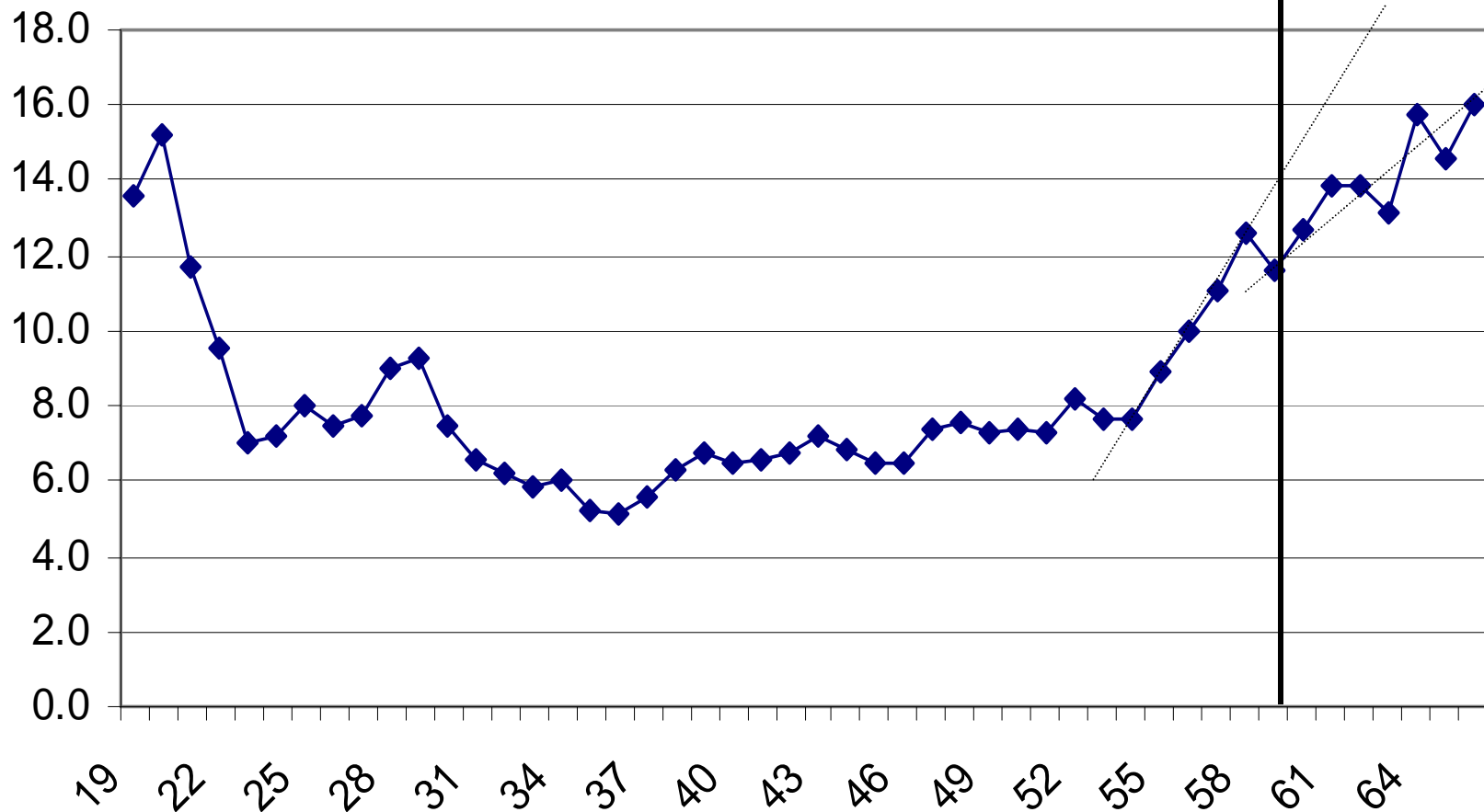
Trial in commercial farm : Pondicoq[®]

Commercial farm

Isabrown : 2 x 60 000 hens

Pondicoq[®]

% (Broken + Dirty + Soft eggs)



Trial in commercial farm : Calcium Pidolate

- **Experimental design :**

Strain : Isabrown layers

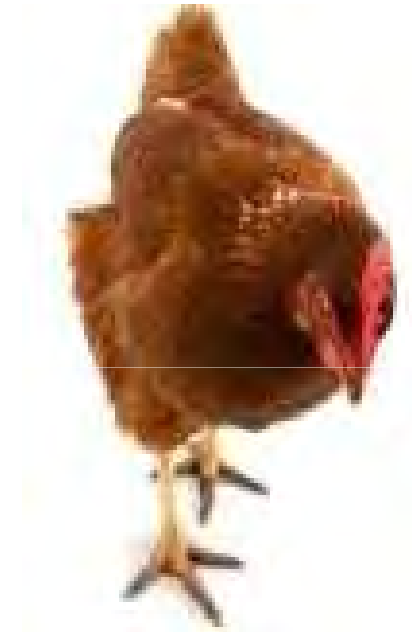
Duration : 2 weeks

Age : 62-64 weeks

45 000 hens with eggshell strength problem, in battery cages

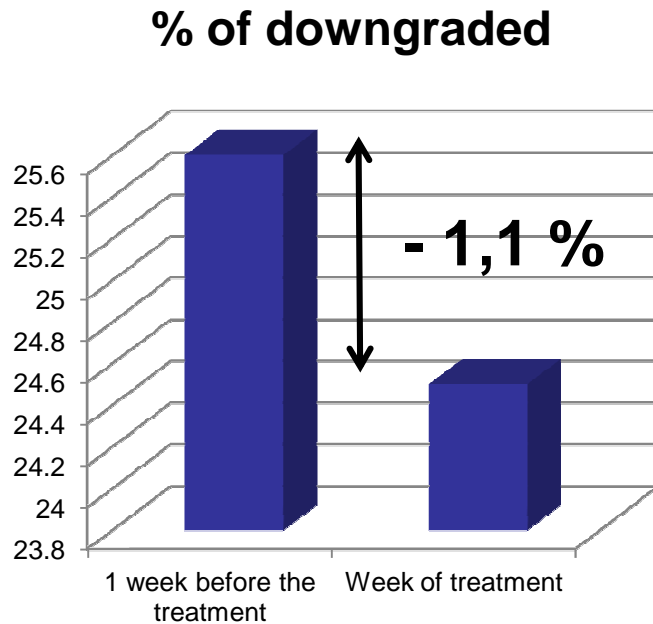
- **Treatment :**

Calcium L-pidolate is incorporated in the feed at 5kg/T

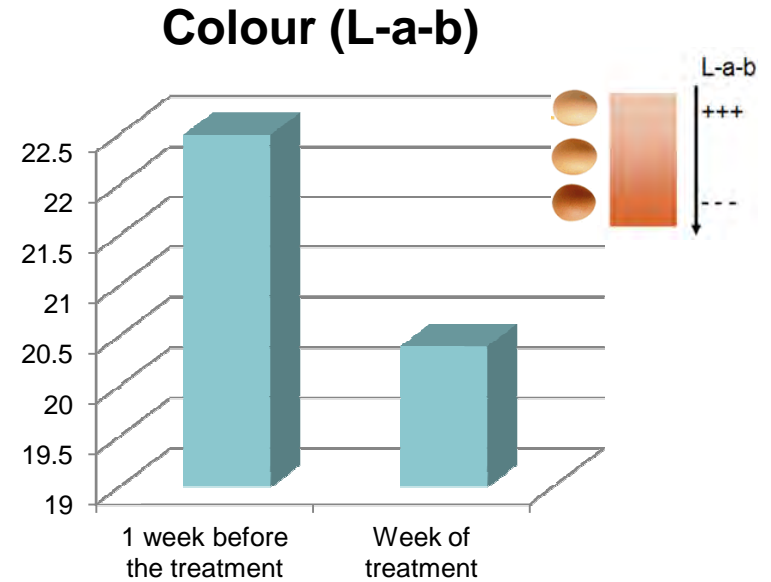


Trial in commercial farm : Calcium Pidolate

- **Results :**



→ **PCa** \searrow **broken and soft eggs**



The eggshell colour is measured with Minolta

→ **PCa** **improves eggshell color**

Using Calcium L-Pidolate in our feed additive helps us to improve eggshell color and to reduce broken and soft eggs



Conclusion

Using Calcium Pidolate in our feed additive Pondicoq[®] helps us to:

- Reduce broken and soft eggs
- Have more homogeneously colored eggshell

Which is useful especially when hens grow old and produce bigger eggs with reduced eggshell strength

90% of Glon's breeders use the Pondicoq[®] after 50 weeks

The publicity of Pondicoq[®] is done during breeders meetings and with the word of mouth...

