



Hubbard

YOUR CHOICE, OUR COMMITMENT



Editorial

Dear readers and business partners,

I thank you once again to join us in reading this Newsletter in which we share the most important fact and figures with Hubbard.

For you and with you we continue to improve the efficiency and profitability of your operations, despite the more difficult circumstances since more than one year; the strong increase in raw materials in the 2nd half of 2012, on-going disease challenges and the uncertainties about markets developments in some countries have again tested an industry which globally is still growing.

At Hubbard, we sincerely believe that this industry will continue to grow in the coming years. It is our responsibility to help you by providing all the elements for this future growth. Genetic selection is by definition actively involved in the development to produce more with fewer resources, making the broilers more efficient to produce meat. Selection for the best feed efficiency has been general practice with Hubbard for many years, which is proven by the actual performance of our products, being recognised as, or among, the most efficient products in the field. Therefore, we have launched during VIV ASIA 2013 our new corporate campaign "Less Feed, More Meat" perfectly illustrating our main target: to propose a wide product range adapted to your market needs, with a feed conversion rate which continuously keeps improving combined with the highest total meat yield.

The new logo shown here can now be found on all our communications and will be the seal of Hubbard.



Selecting for feed efficiency of course has the final aim to improve the profitability of your business, but also aim to make our courses more sustainable in time. Since the beginning of the new century, everyone has increased its awareness that the current pace of development of the world's population could no longer be based on the situation of the last century.

As usual, Groupe Grimaud and its subsidiaries are proactively embracing this new challenge to make the poultry industry more sustainable over time, to be able to continue to feed the growing world population. At Hubbard we actively contribute to this objective by producing more meat with less feed, but on top we are also actively working on the hardiness and robustness of the products we offer.



The major objectives we are pursuing in the «Natural Concept» can be found back in this Newsletter.

In this edition you will find the latest news about our products and the main reasons for their success in a number of countries.

The Hubbard team remain to be at your disposal to keep you informed and I would like to join them by wishing you a pleasant reading and to underline our commitment to satisfy your needs.

Olivier Rochard - Hubbard CEO

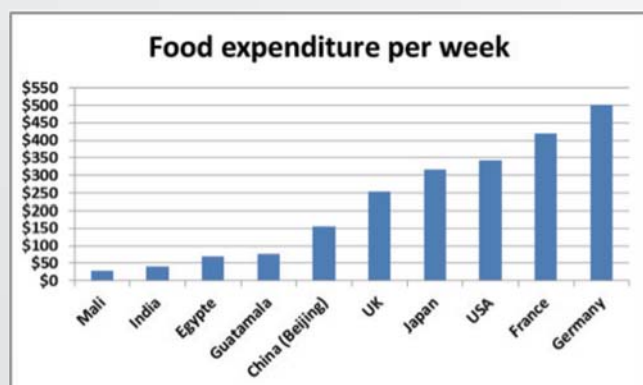


Edito 2

NATURAL CONCEPT

Groupe Grimaud's answer to food sustainability
Frederic Grimaud, CEO of Groupe Grimaud, presented
the company's "Natural Concept" at EuroTier 2012 in
Hanover. The Concept aims to boost the sustainability
of animal protein production in a world of growing
demand and limited resources.

The world population is set to grow by region in 2035 and 2085 and it is clear that Asia and Africa are the areas likely to experience the most rapid growth. We can also see a transition for a staple diet of cereals and vegetables in developing countries to a diet based on processed foods consumed by families in some of the most developed economies resulting in much higher food expenditure by family per week (see graph below).



Some may be looking for a return to organic farming methods to feed the growing world population, but to our opinion this just answers a specific demand for a niche market and will not be the answer to feed a growing human population sustainably.

The 'Natural Concept' has been developed to achieve this aim for a sustainable poultry production. The 5 key points of the concept are:

1. Favour robustness and feed efficiency traits in our breeding programmes
2. Better prevent infectious risks through bacterial ecology management in breeding environment
3. Stimulate the immune system of the animals - natural by competition - acquired by vaccination
4. Because they are very valuable, use the chemical «super-molecules» (antibiotics) only in case of proven pathology or as prevention in case of major stress
5. To give back to the earth the necessary nutrients by the composting of the organic by-products.

CONTENT

> Hubbard R&D: Matching market requirements	3
> "Cross-fertilisation": Groupe Grimaud's R&D-teams share their knowledge.....	4
> Multi-million Euro investment in Hubbard R&D-centre in France.....	4
> RUSSIA / Hubbard F15 demonstrates the success of its concept in top performing and fully integrated broiler companies.....	5
> Hubbard F15 introduction in the USA	6
> INDIA / Pasupati Group sets up their Grand Parent Operation with Hubbard.....	6
> LATIN AMERICA / Classic breeders successfully positioned in Latin America	7
> CANADA / Hubbard enters Canadian market with the Classic	7
> BRAZIL / The Hubbard Flex is changing the rules in Brazil	8
> USA/ The Hubbard M99 breeder male from strength to strength in the U.S. industry.....	8
> HUBBARD color product range: combining welfare, quality and performance	10
> NUTRITION.....	11
> Hatchery breakout program soon available on hubbard web site ..	13
> FINLAND: Hubbard and Suomen Broiler Oy enter into a Historic Agreement.....	14
> CHINA: New Hope Liuhe Technical Seminar - Launching their Hubbard breeder sales in China.....	15
> Anhui Minyihe and Hubbard Technical Services prove benefits of spin-feeding in China.....	15
> Hubbard fully in line with the growth of the Algerian market	16
> Hubbard Customers meet in Thailand	17
> IRAN: GP agreement for Hubbard F15.....	18
> VIV ASIA 2013.....	18
> Hubbard Grand Parent Distributor Meeting held in Bangkok.....	19
> Hubbard Genetics as part of the Broiler Industry.....	20
> Hubbard F15: Hubbard Technical Seminar 2013 held in Turkey	21



LESS FEED – MORE MEAT // R&D FOCUS 1

> Hubbard R&D: Matching market requirements

Continuously upgrading breeding programs in order to match markets requirement is the main goal of the Hubbard R&D-team. One of the biggest challenges that geneticists are facing is running breeding programs where the Elite level pure lines flocks are kept under top conditions (in order to maximise the expression of the genetic potential as well as guaranteeing a disease free status) and, at the same time, breeding for robustness and the ability to perform under a variety of environments.

This difficult equation is solved by:

- breeding the pure lines in a highly bio-secure environment ,
- placing pedigree sib-tests in challenging commercial conditions, these chicks being relatives of selection candidates.

In both types of facilities all pedigree chicks are grown as broilers. The pedigree sib-tests are operated in Europe (temperate climate conditions) and in South-East Asia (hot and humid conditions). All the information recorded on an individual basis is integrated into the pure lines genetic index evaluation. Evaluating genetic potential under challenging commercial conditions is especially important for robustness and welfare traits such as liveability, lower frequency of leg disorders (twisted legs, tibial dyschondroplasia), hock burn and foot pad lesions.

To match markets requirements, geneticists also have to include many breeding objectives in the pure line programs. One of the most important objectives is Feed Conversion Rate (FCR). Since the early 80's, Hubbard has been delivering to the industry significant gains in FCR. Besides the conventional way of selection for FCR (i.e. by using individual cages), RFID (Radio Frequency Identification) technology allows measuring "whole life FCR" of individual birds kept in group pens on the floor, much closer to field conditions. This technology also

gives access to feeding behaviour traits (meals/day, meal size, etc.).

Robustness and welfare traits are also given a very high priority. A variety of traits are measured in the multiple environments design (pure line facilities plus challenging commercial conditions sib-testing): leg defects (valgus, varus, rotated tibia), tibial dyschondroplasia, foot pad lesions and hock burn. Mortality is recorded by cause of death (ascites, flip-over, runting). Blood oxygen saturation, a trait related to resistance to ascites, is also recorded on all selection candidate males. All these data are analysed with state-of-the-art statistical methods allowing identifying the individuals showing the best genetic potential for robustness and welfare traits in different environments.

"Less Feed, More Meat" means also breeding for better breast, legs and total meat yields. To achieve this goal selection candidates are evaluated for breast yield by using a conformation score (subjective scoring assessing breast length, width, shape) and ultrasound technology. Total meat yield is evaluated by processing and deboning samples of the sibs. Hubbard geneticists are also collaborating with research institutes to investigate the potential of meat quality criteria such as meat pH.

Having presented R & D strategies related to broiler commercial performance (live, processing), broiler robustness and welfare performance, the "Less feed, more meat" target is also achieved with breeder performance. Egg numbers, egg weight, egg shell quality, percentage of hatch are key traits in the female lines breeding programs. In the male lines the focus is more on fertility measured under natural mating conditions.

By maintaining close contacts with the different broiler markets, customers, breeding objectives will keep on being upgraded to match broiler industry future needs. With its multi-species geneticists teams, being part of Groupe Grimaud, gives access to expertise on state-of-the-art breeding tools such as genomics, statistical methods and RFID technology.

LESS FEED – MORE MEAT // R&D FOCUS 2

> **“Cross-fertilisation”: Groupe Grimaud’s R&D-teams share their knowledge**



Early 2013 all R&D-teams of the different companies of Groupe Grimaud came together in France for their annual meeting. All R&D departments of the animal breeding and the biopharmaceutical activity of the group are coming together for 2 days to share their experience and knowledge on topics such as genomics, the latest development in RFID-technology, the selection under challenging field conditions, feed and immunity. These meetings also give the opportunity to restate the conclusions of the different project teams working across the group on selected topics. And it confirms the real advantage of this kind of cross-fertilisation on R&D-level as part which is a major part of Groupe Grimaud’s philosophy and strategy.

HUBBARD INVESTMENT IN COURTENAY

> **Multi-million Euro investment in Hubbard R&D-centre in France**

Hubbard has finalised a multi-million Euro investment plan in its one of its R&D-centres in France at St. Loup d’Ordon, about 1 hour south of Paris.



In the last 2 years Hubbard has already completely renewed 12 poultry houses. The previous buildings have been demolished and replaced by new buildings at the same place instead. The new houses are using the latest technology and are meeting the highest standards for bio-security.

Originally this centre had been chosen in the 60-ies by Mr. Shaver because of its excellent location close to Paris and the fact that there is hardly any other poultry to find in this area. Over the years this location has become the R&D and production centre for the Hubbard Color product range.



Hubbard is already for more than 40 years directly involved in the development of the speciality markets such as organic: “Label Rouge”, free range, “Certified” and more recently the “Freedom Food” and Quality+ standards. Through the wide range of Hubbard Color PS females and Hubbard PS males, customers can make their own combination to suit their specific needs best. Even though the economy has slowed down in the last few years, overall it can still be concluded that the total speciality chicken market has seen a tremendous growth and it is still expected to continue to grow in the coming years.

Together with the Hubbard Redbro, Redbro M and P6N the “Hubbard JA 57” PS female is one of the main products being used for the different alternative markets around the world focusing on taste, tradition and quality. In 2008 Hubbard also introduced a new product called the “Hubbard JA 87” PS female, which answers to the changes in consumption patterns and offers a real balance between economic growing of alternative chickens and the demand for conformation and meat quality in combination with very good welfare traits.

2

HUBBARD PRODUCTS HUBBARD F15

> RUSSIA / Hubbard F15 demonstrates the success of its concept in top performing and fully integrated broiler companies

Within the last 12 years the Russian poultry industry has been drastically changed and improved. The total production has increased 3-times in this period of 12 years through increased placements and much better efficiency. A state-of-the-art, modern and mostly fully integrated industry is now in place, producing over 3 Million tons of broiler meat per annum and close to 20 Million broiler parent stock being placed per year.

Hubbard has been present since the beginning of this 'revolution' in the Russian broiler market through its local distributor ISABALT who have their GP farms near St Petersburg (since 1995) and Belgorod (since 2007). The Hubbard F15 has been and currently is, by far, the N° 1 breed in the Russian market; whether you consider the whole country or the top ten largest companies, with an average production over 200 000 tons/year.

This success is nothing less than the demonstration of the fitness of the Hubbard F15 to a very intensively integrated production system, aiming at the production of broilers with a liveweight of 2.0-2.4 kg used for a mixture of final products (whole carcass + cut up).

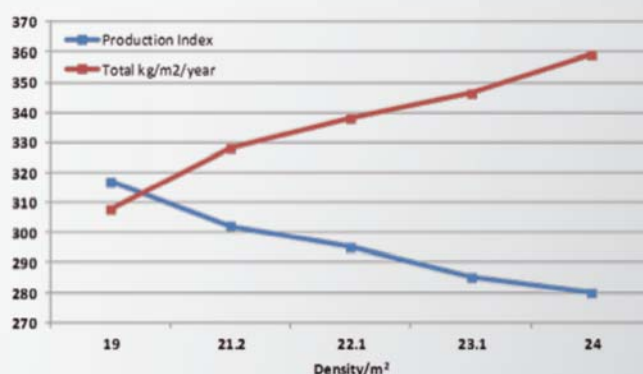
3 keys factors of efficiency have enabled the Hubbard F15 to reach and maintain its position in this fast developing market:

• A better productivity /m2:

At the PS level is it very obvious and significant with 20% more output per m2, or better said on average +200 hatching eggs/ m2!!

Density/m ²	19,0	21,2	22,1	23,1	24,0
Production Index	317	302	295	285	280
Total kg/m ² /cycle	39,9 kg	42,0 kg	43,7 kg	45,3 kg	47,4 kg
Cycles/year	7,7	7,8	7,7	7,6	7,6
Total kg/m ² /year	307,7 kg	328,1 kg	338,0 kg	346,4 kg	359,0 kg
Live cost/kg (roubles)	36,15	36,02	36,02	36,01	35,99

But it is also true at the broiler level: the recognized better litter and leg quality of the Hubbard F15 broiler gives the Russian customers the possibility to work successfully with higher densities, without a real trade-off. Even if the Europe Efficiency Index (EPI) is decreasing with higher densities, the cost per kg remains stable while the yearly production can be increased up to 350 Kg/M2/year!!



• The best feed efficiency ever:

Accumulating the very good FCR of the broiler and the feed savings on the parent stock level give on average advantage of 100 g of feed less/kg broiler live weight compared with all major breeds available in the field.

• A fair processing performance:

As in most countries today processing performance is not anymore just about breast yield, but about the total processing performance (total meat yield, % of condemnations, % of good quality and level of uniformity of the carcasses and meat). When those criteria's are recognized, measured and added up together, the Hubbard F15 broilers do not have to be 'shy' to compete with any other solution offered in the market!!

The Hubbard F15 is the real Feedsaver for the Russian market and follows the Hubbard concept of "Lees Feed, More Meat" perfectly well.

> Hubbard F15 introduction in the USA

The first part of April 2013 highlighted the official US launch of the Hubbard F15 breeder females being placed within an entire complex. The Arkansas based complex began placing the first Hubbard F15 females mated with the Hubbard M99 and will place approximately 400,000 breeders annually.



Prior to the initial placement, Hubbard hosted a Grower Appreciation / Hubbard F15 Presentation banquet for the entire complex. The 120 growers present were also greeted by a large and excited Hubbard entourage with attendance of Mark Barnes, Yves Jego, Sean Holcombe, Steve Crosson & Gary Warren. From the integration noted personnel included their Divisional Vice President, the Sr. Veterinarian & Vice President of Live Technical Services.



Sean Holcombe, Hubbard LLC's Technical Services Manager gave a brief Hubbard F15 presentation on breeder & broiler performance and the future

expectations to be realized within the complex. The complex's live production, breeder and broiler managers together with their technical teams were also present and attentive. This complex had two earlier flocks of the M99xF15 package in 2010 which had performed exceptionally well. Unfortunately a change in product mix and personnel had delayed this important stepping stone for Hubbard until this year, though the Hubbard F15's performance around the world had created vast interest inside the US integration. The sales and technical staff of Hubbard recognise this is a tremendous opportunity and have been told of both the significance and importance of the parent stock. Successes in this first US integration placing large numbers of the Hubbard F15 will springboard future growth of the Hubbard F15 sales within the rest of the US industry.

HUBBARD CLASSIC

> INDIA / Pasupati Group sets up their Grand Parent Operation with Hubbard



Pasupati Feed Mill, based near to Calcutta in Eastern India, concluded a Grand Parent Agreement with Hubbard during the VIV Exhibition (Bangkok) in March 2013. As one of biggest feed millers as well as breeder farmers in Eastern India they have currently over 200,000 breeders, but with plans to double this in the near future. Pasupati have their own broiler integration and have a reputation of quality supply in Eastern India. They are currently finalising the construction of the quarantine and Grand Parent farms.



This project is now well initiated thanks to a team and confident spirit: David Fyfe Business Director for Asia Hubbard, Alastair Lewin Senior Technical Manager Hubbard, Dr. A.G. Rao Technical Consultant Pasupati Feeds, Mr. Prakash Rout Managing Director & Owner Pasupati Feeds, Subhasis Sahu "Brother" – Engineering Manager Pasupati Feeds and Kapil Manwal, Area Technical Manager Hubbard.

The decision to choose Hubbard follows on from a series of successful breeder and broiler trials initiated in 2011/12. Pasupati Feed Mill owner Mr. Prakash Rout commented, "The Hubbard Classic PS Female with the M99 Hubbard PS Male line is a truly fantastic combination. It has demonstrated itself to be very competitive under Indian conditions where temperatures regularly can break the 40°C mark. We need a breeder which can produce the maximum number of large chicks and a broiler that can withstand the rigours of Indian climatic and environmental conditions. This Hubbard product ticks all the boxes, so to speak. I have not taken this decision lightly as I have travelled to a number of neighbouring countries where Hubbard also have a strong market presence and collected performance data and discussed with other users as well as handling the stock to assure myself of the product.

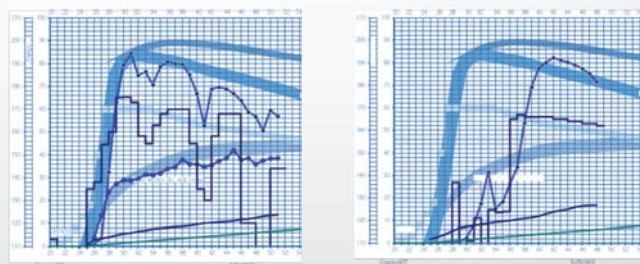
Hubbard's local and International technical service team have been instrumental in the planning and design of the new Quarantine and Grand Parent farms which are due for completion with the objective to import the 1st Hubbard Classic Grand Parents before the end of 2013. Hubbard has a strong presence in the region and their team is well experienced, commercial farmers just love the broiler performance and can't get enough of them hence our decision to invest in the quarantine and Grand Parent facilities to boost our production as well as to give us the independence of supply we need to grow our own business."

> LATIN AMERICA / Classic breeders successfully positioned in Latin America

The Classic breeder was re-introduced with great success in Latin American in early 2012. Its high production potential, in terms of egg numbers and chicks per hen housed has been demonstrated when grow in brown-out and black-out conditions. A summary of the oldest 5 flocks is presented in the next table. Peaks above 90% in floor production facilities have been obtained, along with persistence of as many as 14 week with productions above 80 per cent.

CLASSIC BREEDER PERFORMANCE SUMMARY: LATIN AMERICA							
FLOCK ID:	MEX-97	ES-173A	ES-173B	ES-126	ES-175A	ES-175B	CP-128
HATCH DATE:	2-Mar-12	19-Mar-12	2-May-12	19-Mar-12	2-May-12	22-Jun-12	
HOUSE TYPE:	Blackout		Brownout				
INITIAL BIRDS	28,905	23,413	8,606	25,331			12,033
BODY WEIGHTS, g:							
4 wk	389	468	516	454			485
8 wk	788	950	999	908			860
12 wk	1210	1457	1,366	1394			1,276
16 wk	1632	1785	1,806	1872			1,710
20 wk	2160	2193	2188	2,275	2,270		2,200
24 wk	2973	3001	2992	2,869	2,901	2,933	2,948
BIRDS AT 25 WK	26,663	10,986	10,987	7,772	12,084	12,075	11,202
LIVABILITY, %	92.2	93.8	90.3	95.4			93.1
PEAK PRODUCTION, %	85.6	88.0	88.0	87.0	92.0	91.0	87.2
AGE AT PEAK, wk	31	32	32	34	31	30	32
WEEKS OVER 80%	10	14	14	7	12	12	11
ACTUAL AGE, wk	54	64	62	57	42	42	49
ACTUAL PRODUCTION, %	60.8	61	62	64	79	78	66
TOTAL EGGS/HEN HOUSED	141.3 (-2.1)	191.3 (+8.4)	184.5 (+8.9)	148.1 (-7.9)	91.8 (+5.1)	94.1 (+4.7)	120.3 (-0.7)
PERSISTENCE, % drop/wk	-1.08	-0.84	-0.87	-1.00	-1.18	-1.08	-1.25
ACTUAL BIRDS	24,449	10,370	10,451	7,373	11,554	11,611	9,441
LIVABILITY, %	91.7	94.4	95.1	94.9	95.6	95.2	84.3

But high reproductive capacity is not the only trait characterizing the Classic; its resilience and rusticity were demonstrated when flocks strongly underfed during its production phase were capable of recovering production after adequate feed levels were delivered again (see graph below).



Classic broilers are feather sexable. Under Latin American conditions they have shown fast early growth, good

conformation and excellent feed conversion, a trait that seems to be common to all Hubbard broilers.

> CANADA : Hubbard enters Canadian market with the Classic

June 21st marked an important date in the progress of Hubbard LLC. The first shipment of M99 x Classic was delivered to one of the leading hatcheries in the Quebec province in Canada. Supplementing this initial delivery next month another shipment of Classic parent stock will also be sent to the sister company in the province.

The shipments of Classic parent stock are especially pleasing to Hubbard LLC as it marks a firm reentry into one of the oldest & traditional export markets served by the U.S operation. The progress was also made possible by the hard work of Rock La Roche, Hubbard LLC's official account representative for Quebec, Ontario & the Maritime Provinces.



Last September Hubbard LLC hosted both the groups at their Walpole, NH office. Here they received detailed analysis of Hubbard & our products from Mark Barnes Director Hubbard LLC, Sean Holcombe Technical Manager, Gerald Herbert & Fariba Izadi Geneticists. A conference call was also held with Matt Greenwood, Hubbard LLC's nutritionist.

One of the important decisions made from the meeting was to trial extensively the M99 x Classic broilers from the U.S. Through the diligence of Jay Daniels & the Hubbard LLC planning department in close cooperation with Morris Hatcheries a number of broiler trials were orchestrated. Results were very favorable to the Quebec producers resulting in the logical step of placement of the M99 x Classic breeding stock in the province.

We look forward to expanding the Classic product in all of Canada in the near future.



Couvoir Ramsay Inc. and Couvoir Scott Ltée visited Walpole with Nicolas Neyra — Business Development Hubbard & Rock Laroche Sales Representative.

HUBBARD FLEX

> BRAZIL / The Hubbard Flex is changing the rules in Brazil



The Brazilian poultry industry has been growing very fast as over the last 10 years breeder placement grew from 30 million to 46 million per year. Considering some major global events like the Avian Influenza in 2006, when people in several parts of the world decreased the poultry meat consumption as they were afraid of get a flu, or the worldwide economic crises which started in 2008 this growth of 52 % is really something impressive.

Even with this scenario, the managers and director of the Brazilian companies understood that the growth of their companies would be a good way to be more competitive. With a high entrepreneurial spirit, the advantage of having one of the largest grain production in the world, investments to continuously improve performances, strict cost control as never seen before and a market with a huge amount of people gaining better salaries which increase the consumption : the success was just a matter of time.



In the middle of this period, Hubbard re-entered the Brazilian market with the Hubbard Flex package. Most of the Brazilian broiler producers thanked Hubbard for coming back giving them "another option of supply of breeding stock", even though at that time just few of them placed the first Hubbard product. But those few flocks were enough to show the market that the Hubbard broiler was really competitive.

Today, with 6 points better Feed Conversion and 2 grams better Average Daily Gain, the Hubbard Flex is not just "another option" anymore, but the "best option" for the Brazilian market!

COMPANY A - 2013	FLEX	COBB SF	COBB FF	ROSS 308
Age (d)	48.0	47.5	47.5	47.5
Mortality	3.6%	3.8%	3.4%	3.80%
LW (g)	2,983	2,896	2,866	2,864
ADG (g/d)	62.1	60.9	60.3	60.3
Age at 2.85 kg	46.4	46.9	47.3	47.3
FCR	1.76	1.81	1.79	1.87
FCR at 2.85 kg	1.72	1.80	1.79	1.86
EPI	340	324	325	311

COMPANY B - 2013	FLEX	COBB SF	ROSS 308
Av. Age (d)	46.6	46.3	46.8
Av. Mortality	3.0%	3.7%	3.7%
Av. LW (g)	2,785	2,717	2,694
Av. ADG (g/d)	59.8	58.6	57.6
Av. Age at 2.50 kg	42.8	43.4	44.2
Av. FCR	1.72	1.77	1.80
Av. FCR at 2.50 kg	1.64	1.70	1.74
Av. EPI	336	320	308

HUBBARD M99

> USA/ The Hubbard M99 breeder male from strength to strength in the U.S. industry



Hubbard has long been a part of the U.S. broiler industry since our early days in New Hampshire. Today, this association is stronger than ever as we approach the 100 year anniversary.

It was only a few short years ago that the Hubbard M99 breeder male was introduced in our largest customer in a few complexes in the south U.S. What began as literally a few Hubbard M99's has since blossomed to dominance in the U.S broiler industry. Present industry numbers recognize that the Hubbard M99 male is by far the leading breeder male in the U.S. industry with the gap growing larger by the month.

As such, the Hubbard technical service team under Sean Holcombe's management has three experienced & recognized technicians to follow the product in this growing customer base. The Hubbard M99 breeder male now transcends not only the U.S. broiler industry but also across the globe. The Hubbard M99 breeder male is present in virtually all U.S integrations, present in all major producing poultry states as well as all the major hatching egg companies.

• Over the past 4 years, three regional technical service representatives have been hired to meet the increased technical service responsibilities. Each technician has extensive live production experience. Cumulative of 70+ years in the poultry industry:



WILLIAM "BILLY" TYSON

Technical Service
Representative. U.S.
Southeast



JOSH COX

Technical Service
Representative
Southeast and Mid-
Atlantic Region.



STEVE CROSSON

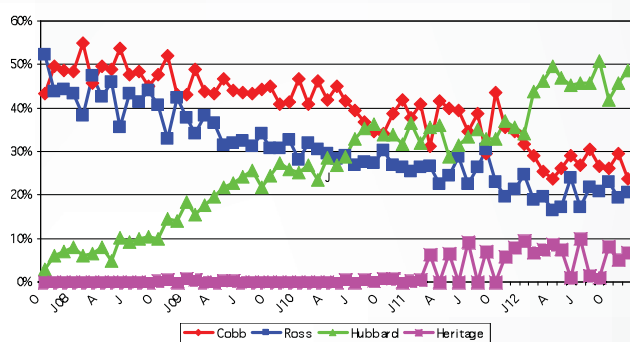
Technical Service
Representative
USA Western Region.

• Performance Summaries and applicable Technical Bulletins are included at each delivery:



The graph below shows the breeder males capitalized (post pullet house transfer) in the U.S industry from October 2007 through December 2012. In early 2012 the Hubbard M99 became the male of choice & since then Hubbard M99 capitalized numbers have continued to flourish.

Males Capitalized by Genetic co. Agri Stats – Oct 07 to Dec 12



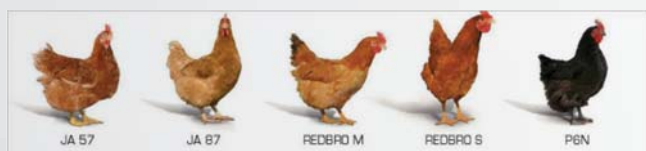
HUBBARD COLOR PRODUCTS

> **HUBBARD color product range:**
combining welfare, quality and performance

Hubbard Color selection program and Product Range

Finding the right balance between price and quality, meeting new societal demands, preserving the qualities of traditional selection methods while enjoying the advantages of innovative research; this is all what is behind the Hubbard Color selection program. Already for more than 40 years Hubbard's coloured genetic lines have been bred in France responding to the different world market requirements focussing on welfare, quality and taste. The different breeds of the Hubbard Color product range are grown and selected in France using traditional methods in the countryside of Bretagne, the Loire Valley and the Burgundy region.

With its large range of speciality breeds, Hubbard covers the whole range from organic to the "Quality+" markets. Through the range of Hubbard Color PS females below, and the large range of Hubbard PS males, Hubbard customers can make their own combination to suit their specific needs best.



Hubbard JA57 / JA87, going "beyond the standard"

Many farmers and consumers of chickens originating from the Hubbard JA57 and JA87 breeding stock recognise the value of this kind of production which is going «beyond the standard» of conventional chickens and its way of production, offering a new choice to produce broilers for a market looking for more than just the standard.

Since many decades the Hubbard JA57 PS female forms the basis for the "Label Rouge" and "Certified" broilers in France, and more recently also for the 56-day free range, 81-day free range and organic broilers in the UK and the 56-day broiler market (indoor with a wintergarden) in the Netherlands ("1-star").

The Hubbard JA87 PS female was introduced in 2008 as an answer to the changes in consumption patterns in the EU and

offers a real balance between economic growing of alternative chickens and the demand for conformation and meat quality in combination with very good welfare traits. This product perfectly fills the gap between the standard broiler and the 56-day (free range) chicken, and - like the JA57 - also complies with the Freedom Food standards in the UK and the animal welfare regulations in the Netherlands. It forms the basis for the Freedom Food indoor broiler production in the UK and is also a very good answer to the "Chicken of Tomorrow"-project in the Netherlands or any other similar market looking for the combination of economy and animal welfare.

The JA57 and JA87 have proven to give our customers enormous advantages in animal welfare traits such as active behaviour, very low levels of hock burn and footpad lesions in combination with the best technical results on breeder and broiler level of all Color broilers available in the market. The quality of the litter in the broiler houses is remarkably good and mortality levels are very low, resulting in much less need to re-litter the houses or to use antibiotics, if any. Therefore these additional costs are much lower than with conventional broilers to produce a good quality final product.



Like any conventional breed, the Hubbard products used for the "differentiated growth" markets benefit from genetic progress in terms of yields and some of the more performing products are able to «play on the same field» as conventional chickens, also knowing that the parent stock females of the Hubbard Color produce more chicks per hen housed than any conventional breed.

Données	F915	JA987	JA957	JA887	I857
Age à 2200 g	35,6	41,5	44,0	45,0	47,5
IC à 2200 g	1,52	1,82	1,88	1,97	2,06
RDT PAC à 2200 g	100,0	101,0	99,1	99,2	98,6
RDT Filet / Vif à 2200 g	100,0	98,9	92,7	93,1	89,6
RDT Cuisse / Vif	100,0	99,8	98,9	98,5	98,2
RDT Filet + Cuisse / Vif à 2200 g	100,0	99,4	96,3	96,2	94,6

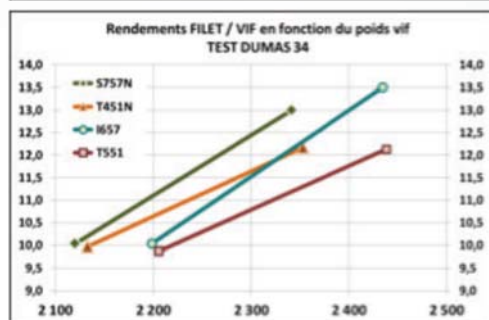
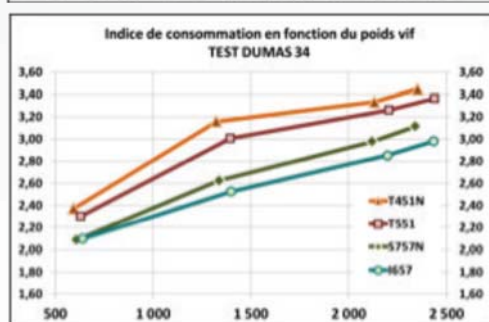
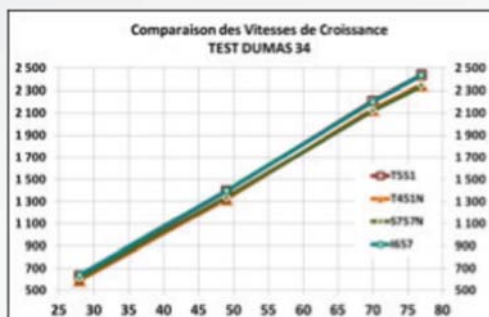
Rendements exprimés en base 100F915

Feeding well and feeding healthy food to the world while respecting consumer's demands and the rules of animal welfare; that is the mission of Hubbard.

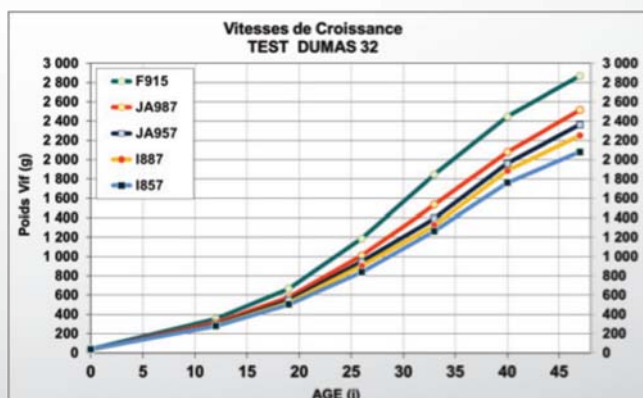
Test results in France

Recent test results confirm that the Hubbard JA products are fulfilling the needs of different market segments:

- The last test using the Label Rouge accredited breeds shows the clear advantage in feed conversion and meat yield while maintaining growth potential adapted to the constraints of the Label Rouge and the “slow growth”-markets



- Another test done in shows that for the “differentiated growth” markets two Hubbard males (ColorYield and M99 or M77) and two Hubbard females (JA57 and JA87) cover all the needs, starting from a “standard+”-concept growing slightly slower than conventional broilers to a growth rate less than 40 g/day.



3

HUBBARD TECHNICAL

> NUTRITION

How to cope with high feed cost?
Or any new perspective in broiler nutrition?
J. MICHARD – Hubbard Nutritionist

Beyond the promising perspectives of a continuous growth in broiler meat production around the world a look at the high and also volatile feed prices brings some disenchantment. Feed is the major component of input cost, accounting for about 60-70 % of the total cost and according to OECD/FAO prices of corn and soyabean meal, which are the major poultry feed ingredients are anticipated to remain high.

The poultry industry's focus used to be on growth rate and feed conversion alone but now, and increasingly in the future, this focus must be on cost per kg live weight or kg meat depending on the final market. All the above evolutions mean a review of all nutritional concepts from very basic ones to innovative solutions.

In addition to amino-acid supply, energy concentration and physical feed form, many other factors including nutritional, environmental, health related, management factors and raw materials cost can potentially affect broiler performances and profitability. They are not new and with the higher feed cost they are all more important than ever.

1. Feed additive to optimize nutrition.

Feed additives have gained considerable attention in the feed industry and to an increasing extent producers are incorporating them into their feeding programs.

- The magnitude of enzymes in compensating for the rising corn and soya bean meal prices is limited, the use of xylanases & phytases is always beneficial with a gain on feed cost of 5 to 10 /T (depending on raw materials composition). And many believe we can expect an additional gain from new proteases by another 3 to 6 T.
- Mycotoxin prevention: The most practical prevention of mycotoxin problems is the use of an effective, in vivo scientifically proven, anti-mycotoxins product at the right doses especially in the broiler starter diet.



- Compounds that may secure nutrient utilization (digestibility enhancers) and optimize gut health (growth promoters). In the last few years, prebiotics, probiotics, acids and phytogetic compounds used as alternatives to antibiotic growth promoter have gained considerable attention in the feed industry. However, a better understanding of the mode of action of these feed additives is necessary to design compatible feed additive programs and to control gut health.

2. Selection & evaluation of ingredients. Use of “alternative” raw materials

The continuous improvement in broiler genetics requires regular evaluation of nutrient specifications in raw materials as well as in compound feeds to exploit the modern broiler’s potential.

The use of more local feedstuffs may be a critical factor for the sustainability of poultry production in many regions of the world. Sorghum, wheat and cereal by products such as Distiller’s Dried Grain with Solubles (DDGS) are used as partial replacement for corn in some areas. There are also alternative protein sources such as canola meal, sunflower meal, lupines and some other vegetables. A feedstuff that may be classified as non-traditional in some regions may actually be traditional and based on many years of usage in others. However, the prices of these alternatives are most often linked to those of the conventional ingredients. So, an increasing trend of corn will see a similar trend with wheat and sorghum.

Decisions on alternative **ingredients** must also consider their **availability**, their nutritional value and its limitations

3. Interest of lower density diets?

Broilers are capable of thriving on widely varied types of diets but usually are fed diets composed of low-fibre grains and highly digestible protein sources. Formulation generates a “least cost” diet for a certain pre-determined feed specification. It does not look at the overall profitability of the production process. Opportunity may well be lost if the nutritionist ignores bird response to nutrients, in particular lower nutrient density, and it is this aspect that needs to be added to our methodology of evaluating an ingredient and/or a feeding program.

The determination of the metabolic energy (ME) level of poultry diets is perhaps the most important decision that has to be made by the nutritionist. Energy contributes approximately 60 to 70% of the cost of a broiler diet, making the selection of an energy level that will maximise profit extremely important.

In open house broiler facilities (see picture 1), Hubbard ran several field trials using the Hubbard Classic with standard ME (3,000 Kcal/kg with starter crumbs and 3,075 Kcal/kg in pelleted grower) and low ME (2,850 Kcal/kg; 2,925 Kcal/kg or 5 % dilution). Results show (see table 2) that with a high oil, high corn and high soyabean meal price (Sept 2012 as an example) and when using crumb/pellet for a whole bird market, the low ME strategy proves to be a cost effective solution.

In a similar manner, Hubbard ran pen trials using the Hubbard I657 (see picture 2) with 3 types of feeding programs: Standard “High-High” ME (2,850 Kcal/kg with starter crumbs, 2,950 Kcal/kg with grower mash and 3,000 Kcal/kg in finisher mash), “Low – High” ME (2,850, 2,850 and 3,000 Kcal/kg) and “Low-Low” ME (2,850, 2,850 and 2,900 Kcal/kg). Again also on “slow growth” broilers, the low ME feeding strategy proves to be an economical option on both feed cost/kg live and feed cost/ Kg carcass (see table 3).



Hubbard broiler trial facilities in Bangladesh - (open housing)



Table 2 : Results of 5 trials done in open house in Bangladesh (Hubbard Classic - Hatch December 2011 to August 2012)

	Liveability (%)	Weight at 35 days (g)	ADG (g/d)	FCR	FCR at 2.0 kg	FCR in Kcal at 2.0 kg	Feed cost €/T live (Sept 11)	Feed cost €/T live (Sept 12)
Low ME	94.8	1,928	55.1	1.87	1.90	5,513	607	740
Standard ME	94.9	1,979	56.5	1.84	1.85	5,651	608	770

Table 3: Results of a indoor pen trial in France (Hubbard I657 - Hatch December 2012)

	Weight at 77 days (g)	ADG (g/d)	FCR	FCR at 2.2 kg	FCR in Kcal at 2.2 kg	Carcass yield %	Feed cost €/T live (Dec 12)	Feed cost €/T carcass (Dec 12)
Low-Low ME	2,365	30.7	3.00	2.84	8,145	66.3	985	1485
Low-High ME	2,378	30.9	2.99	2.82	8,192	66.7	995	1492
High-High ME	2,377	30.9	2.99	2.82	8,302	66.8	1,014	1,518

These trials show that it is important to remember to take the broiler performance and financial return into consideration when evaluating alternative nutrient density and ingredients. Now with the rising feed ingredient prices and tightening supplies of oil, corn and soyabean meal many discover that being flexible in adapting energy levels and in using alternative inputs could help in cost price management.

> Hatchery breakout program soon available on hubbard web site

A new, complete and comprehensive Hubbard Egg break-out program for fertility and hatch analysis is now available and can also be downloaded from the Hubbard website.



This program is an excellent tool offering the Breeder/Hatchery production team a complete program to analyse flock fertility and hatchery egg break-out data. This program furnished relevant reports that will allow for the identification of flock and or hatchery related issues that will facilitate flock and hatchery management improvement.

When flock fertility and or hatch break-out data is entered into the program weekly it will furnish not only obviously the weekly information, but trends by flock, incubator & hatcher trend, rack and or tray level information.

In addition to the trend information, when flocks are analysed weekly the program will compile flock historical information. This information can be utilised at the time a flock is depleted for example, to compare flock fertility and hatchery related issues to a company or industry standard.

The program:

- allows the user to sort daily & time related trends, by flock, incubator, hatcher and tray level for analysis and flock and or hatchery management.
- identifies by category actual fertility percentages and the time-frame of embryo loss as it occurred during incubation.
- gives the management team real-time Hatch-of-fertile information and calculated actual hatch of each tray broken out plus the overall percentage for the sample taken. This is very important as Hatch-of-fertile should be utilised as the true evaluation standard for hatchery management.
- Gives the categories for embryo loss which will help to identify what needs to be managed going forward.

Breed Comparison By Flock Age

Print

Close

ACTUALS																			
Age	Infertile	1-3 Mort	4-7 Mort	8-14 Mort	15-18 Mort	19-21 Mort	Call Chicks	S.E.U.	Farm Cracks	Contam	Mold	Abnorm	Trans Cracks	Malpos	Dead FIP	Live FIP	HGF	Residue Fertility	Actual Hatch
32	3.33%	1.33%	0.67%	2.00%	1.33%	0.67%	0.00%	0.00%	0.67%	0.00%	0.00%	0.00%	0.67%	0.00%	0.00%	0.00%	93.79%	96.67%	90.67%
35	1.44%	2.06%	0.62%	0.62%	1.85%	3.09%	0.41%	0.21%	0.62%	0.62%	1.03%	2.06%	0.41%	1.44%	0.00%	0.00%	91.23%	98.56%	89.92%
38	1.65%	1.65%	0.82%	1.44%	1.03%	2.47%	0.21%	0.21%	0.00%	0.21%	0.21%	1.23%	0.21%	1.44%	0.00%	0.00%	92.25%	98.35%	90.74%
43	3.09%	1.85%	0.41%	0.62%	0.62%	4.12%	1.85%	0.00%	0.00%	0.41%	0.00%	1.85%	1.03%	1.44%	0.00%	0.00%	90.21%	96.91%	87.45%
Act Avg	2.38%	1.72%	0.63%	1.17%	1.21%	2.58%	0.62%	0.10%	0.32%	0.31%	0.31%	1.29%	0.58%	1.08%	0.00%	0.00%	91.87%	97.62%	89.69%
STANDARD																			
32	3.00%	2.00%	0.85%	0.57%	0.81%	2.08%	0.11%	0.13%	0.12%	0.25%	0.27%	0.36%	0.23%	0.43%	0.18%	0.41%	90.72%	97.00%	88.00%
35	2.00%	1.81%	0.77%	0.50%	0.82%	1.93%	0.13%	0.13%	0.13%	0.30%	0.29%	0.34%	0.23%	0.46%	0.18%	0.33%	92.86%	98.00%	91.00%
38	2.00%	1.77%	0.70%	0.49%	0.80%	1.87%	0.13%	0.10%	0.11%	0.26%	0.29%	0.35%	0.25%	0.40%	0.17%	0.33%	91.84%	98.00%	90.00%
43	3.00%	1.82%	0.71%	0.49%	0.90%	1.88%	0.17%	0.12%	0.12%	0.32%	0.26%	0.35%	0.24%	0.50%	0.20%	0.33%	91.75%	97.00%	89.00%
ACTUAL VS. STANDARD																			
32	(0.33)	0.67	0.18	(1.43)	(0.52)	1.41	0.11	0.13	(0.55)	0.25	0.27	0.36	(0.44)	0.43	0.18	0.41	3.07	(6.33)	2.67
35	0.56	(0.25)	0.15	(0.12)	(1.03)	(1.16)	(0.28)	(0.08)	(0.49)	(0.32)	(0.74)	(1.72)	(0.18)	(0.98)	0.18	0.33	(1.63)	0.56	(1.08)
38	0.35	0.12	(0.12)	(0.95)	(0.23)	(0.60)	(0.08)	(0.11)	0.11	0.05	0.08	(0.88)	0.04	(1.04)	0.17	0.33	0.42	0.35	0.74
43	(0.09)	(0.03)	0.30	(0.13)	0.28	(2.24)	(1.68)	0.12	0.12	(0.09)	0.26	(1.50)	(0.79)	(0.94)	0.20	0.33	(1.54)	(6.09)	(1.55)
ACTUAL VS. STANDARD AVERAGE																			
	0.12	0.13	0.13	(0.66)	(0.38)	(0.64)	(0.48)	0.02	(0.20)	(0.03)	(0.03)	(0.94)	(0.34)	(0.63)	0.18	0.35	0.08	0.12	0.19
FLOCK SOURCES																			
Age	Flock	Farm																	
32	12345	TEST																	
35	31	MOOREFIELD																	
35	32149	HUBBARD																	
38	20	MOOREFIELD																	
38	71558	HUBBARD																	
43	14	MOOREFIELD																	

4

HUBBARD DISTRIBUTION NETWORK

> FINLAND: Hubbard and Suomen Broiler Oy enter into a Historic Agreement

Suomen Broiler and Hubbard SAS have signed an exclusive distribution agreement with Hubbard.

The first consignment of Hubbard H1 Grand Parent stock arrived by charter to Turku airport end of April 2013 in very good condition and Suomen Broiler Oy will start supplying the Hubbard H1 Parent Stock to their customers in Finland and neighbouring countries as from the end of 2013.



Paistipoika Production House – Suomen Broiler Oy

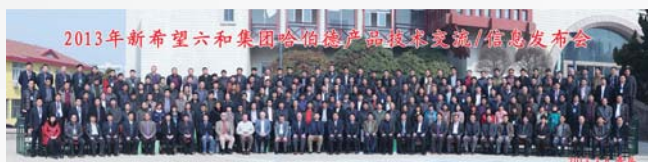


After 25 years of collaboration with Aviagen, Suomen Broiler will no longer act neither as a Distributor of

Ross stock into Finland, Estonia, Lithuania and Latvia nor as a subcontractor to Russia.

Reijo and Vesa Jokela, Directors of Suomen Broiler Oy, said "we are very excited to become part of the Hubbard family to help our business grow in Scandinavia and abroad". Paul van Boekholt, Hubbard Business Director, stated: "this agreement is a first and major step of Hubbard into Scandinavia, we are very confident that the Hubbard products will succeed in this region as Hubbard is well-known for its focus on animal welfare traits. For example, thanks to the much dryer litter the Hubbard broilers have a very low level of footpad lesions and hock burn. We are looking forward to our collaboration with Suomen Broiler Oy and to expand our market share in Northern Europe.

> CHINA: New Hope Liuhe Technical Seminar - Launching their Hubbard breeder sales in China



Anhui Minyihe Poultry Breeding Co. Ltd completed the launch of their Hubbard breeder sales in China mid-March 2013. The conference was held over two days with guest speakers from Hubbard's Technical Service team in Europe as well as the USA, equipment suppliers such as Collinson UK talking about the use of spin feeders along with local guest speakers from New Hope Liuhe, the local university and detailed Industry figures.

More than 240 guests attended showing the huge amount of interest in Hubbard's genetics, as well as their technical know-how. Key note speakers included Mr Huang Bing Liang (Chairman of Liuhe) and David Fyfe (Hubbard Business Director for Asia).



The Hubbard team present at the meeting included:

- Dr. Eric Bonjour (France), Director of Worldwide Veterinary and Technical Service
- Jiggs Killroy (USA), Director of Hatcheries of Hubbard LLC
- Alastair Lewin (Canada), Senior Technical Specialist for EMEA & Asia
- Kevin Yuan – Hubbard technical manager for China

> Anhui Minyihe and Hubbard Technical Services prove benefits of spin-feeding in China

Anhui Minyihe Poultry Breeding Co. Ltd, one of Hubbard's Grand Parent customers based in China visited Hubbard's UK Grand Parent facilities in Lincoln in 2011 to study the advantages of spin-feeding where an estimated 95% of broiler breeders are fed using spin feeder technology. After careful study and discussions not only with Hubbard's Production and Technical teams, but accompanied with the equipment manufacturer Collinson, Minyihe decided to invest in what is believed to be the first use of spin-feeders in China.



The Grand Parent farm is very isolated surrounded by mountain, offering a unique setting and the very best bio-security conditions. Each intake comprises of 30,000 Grand Parent D lines plus associated A, B and C lines. Once complete, the project will be capable to produce around five million Hubbard parent stock.



> Hubbard fully in line with the growth of the Algerian market

The results during the rearing period using the spin feeders exceeded expectation and resulted in the following benefits:

- The stocking density was able to be increased by 20% compared with conventional pan or chain feeder systems.

This saved the complete costs of 1 whole house per rearing farm.

- The birds as can be seen from the pictures are always very clean, and exceptionally fit, feathering is impeccable. The birds are very calm with good eating behavior, litter is maintained in excellent order without the need for turning due to the encouragement of the birds natural inquisitive scratching behavior even after the feed is consumed birds will continue scratching for several hours which helps keep them occupied and avoid tendency for any vices.
- It was straight forward to manage the uniformity of the flock it was normal to see the uniformity of the birds in a house is above 90%.
- The weekly mortality is very low, less than 0.1% on average as recorded.



For Hubbard's technical service team this was a particularly challenging, but at the same time rewarding, project allowing to work very closely together with the feed mill to assure the quality of the pellet to be used as well as the project team equipment supplier and the farm staff to train and implement this new technology. A good example of how Hubbard can bring not only genetics but practical cost saving technology to their partners in the field.



«At Hubbard Algeria is our desire to secure the national poultry market by guaranteeing permanent access to the best genetics and services!»

In 2006 our strategy has been the establishment of a local production in Algeria and a diversification of sources of breeding stock from at least two European countries. The success of this project required the construction of 6 farms of 3,500 M2, a hatchery with a capacity of 2 million parent stock per year or even more and the hiring of about 100 people to guarantee the success.

From left to right: Eric Delarue, Nadjib Tekfa, Jean-François Hamon - initiators and promoters of Hubbard Algeria

At the Sipsa 2013 exhibition we were proud to confirm the total completion of all our commitments and the opportunity for our customers to choose the origin of the Hubbard F15 parent stock coming from Algeria, France or Italy, all meeting the same high level of quality requirements.

Over the past five years, the poultry industry in Algeria has experienced a significant growth. Hubbard Algeria's anticipation of needs, combined with the very good genetic adaptability of the Hubbard F15 allowed us to develop a strong market share. Hubbard Algeria's analysis of the future incorporates the strong confidence in the continuous genetic development of the Hubbard F15, the complementarity of the production centres in Algeria, France and Italy and also our duties as a market leader to give the best technical support to our customers.

The Hubbard Sipsa 2013 seminar focused on the major aspects involved in good poultry management. Strengthening

the support to the market cannot be done by just ensuring the availability of skills. It is therefore our aim is to further enhance the support already provided by Jean-Yves Blévin – GP Technician and Michel Clech Senior Area Technician - and the involvement of Florian Allègre in developing a close relationship with the veterinary advisors in the various regions of the country. Since March 2013 the sales administration for Algeria is provided by Jennifer Fily. Her presence throughout the Sipsa exhibition allowed her to quickly get to know the market and its main players.

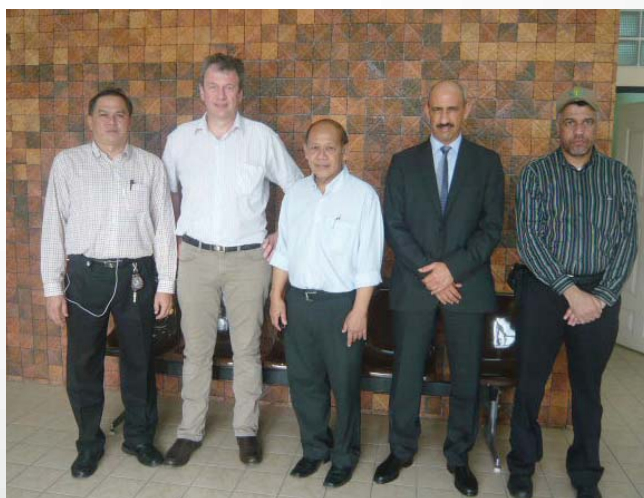
The Hubbard Algeria team works every day very hard to meet the demands and further strengthen the confidence of its customers.



Florian Allègre and Jennifer Fily

> Hubbard Customers meet in Thailand

Soprina (Morocco) visits the Laemthong Integration in Thailand



During March 2013 the company SOPRINA from Morocco attended the VIV ASIA 2013 in Bangkok, Thailand. After the

exhibition SOPRINA was invited as guests of Laemthong Corporation, one of Hubbard's Grand Parent Distributors in Thailand, to visit one of their three processing plants dedicated to primary processing. Laemthong have two other plants for secondary processing as well as a cooking plant.

El Hachmi Mohemane and Ibrahim El Idrissi of SOPRINA were able to tour the plant of Laemthong accompanied by the plant Manager Nakorn Pathom, Monthon Khomcharon, Hubbard Technical Services Manager for Thailand and Claude Toudic, EMEA Technical Services Manager. El Hachmi Mohemane mentioned he was very impressed by Laemthong's strong emphasis on quality and rigorous application of ISO, HACCP controls and procedures.

About SOPRINA:

At this moment Morocco is still predominantly a live bird market. El Hachmi Mohemane and his brothers are owners of one of the largest poultry operations in Morocco with over 450,000 parent stock. A few years ago they have built a complete new feed mill few and now they can produce 100.000 Tonnes per month with 100% heat treated feed. The development and expansion of new broiler farms continues as well.

About LAEMTHONG:

Laemthong is a fully integrated operation from feed milling, Grand Parent Stock, Parent Stock, broilers, primary processing up to further processing including cooking and ready-to-cook meals. Laemthong places over 800,000 Parent Stock per annum and have a capacity of producing 2.2 million broilers per week and as such is one of the longest established and still one of the biggest integrators in Thailand. Laemthong's relationship with Hubbard goes back more than 30 years. Hubbard supplies their world renowned Hubbard M99 PS Male line mated with their Flex PS Female.

"These Hubbard products give excellent fertility at breeder level with low Feed Conversion Ratios, good growth rate and liveability, and high total yield at broiler level. This results for Laemthong in one of the best live costs in the Thai industry. With feed cost continuing to stay stubbornly high, and tough competition on the domestic and export markets for chicken products, live cost has still a major bearing on the overall profitability of any operation", commented Vipavadee Niyamacom, Regional Sales Manager of Hubbard.

> IRAN: GP agreement for Hubbard F15

During VIV Turkey 2013 Hubbard and Mazrea Holding from Iran have signed a long term agreement for the production and development of the Hubbard F15 parent stock in Iran.

After several test done under local circumstances Mazrea Holding decided to become the Hubbard distributor for Iran for the Hubbard F15, and through its subsidiary "Poultry Chain Management Company" they will establish complete new state-of-the-art facilities for the GP operation; they will also establish a high level distribution chain and extension service to further improve the results of the Iranian poultry industry.

Based on their own experience Mazrea Holding is sure that the Hubbard F15 will give tremendous advantages in broiler production to the Iranian industry, with much less feed needed to produce broiler hatching eggs or chicks, and an advantage in FCR on broiler level seen under local circumstances of more than 6%. This is the real meaning of Hubbard's approach with "Less Feed, More Meat" leading to a much more efficient broiler production in Iran.



M.A. Bizhanikia, Managing Director Iranian Modern Farms Holding, and **Olivier Behaghel**, EMEA Business Director Hubbard confirming the new partnership between the two companies.

HUBBARD IN THE NEWS

> VIV ASIA 2013

From March 13th to 15th 2013, the Groupe Grimaud has, once again, met four of its breeding subsidiaries: Grimaud Frères Sélection, Hubbard, Novogen and Choice Genetics, on a common booth during «VIV Asia» exhibition in Bangkok.

Since 2009, the teams became closer and are now perfectly complementary on an Asian market which is diversified and represents a huge potential in terms of animal production.

The success of this common booth pushed us to decide to do so for the Space. In next September, we will have the global stand for Hypharm, Grimaud Frères Sélection, Hubbard and Novogen.

Talisma Aker Labanaya (1st left) and Rafiqul Haque (third left) from Poultry Consultant and Development - Agent Hubbard, Ehsanul Kabir (2nd left) Technical Service Hubbard, David Fyfe (2nd right) Business Director Asia and Suryo Suryenta Technical Service, Hubbard.



> Hubbard Grand Parent Distributor Meeting held in Bangkok

“Less Feed, More Meat”

Prior to the VIV Asia 2013, Hubbard organised a special Grand Parent Distributor Meeting, for which the attendees came from all over the world. This special event was held in the 5-star Banyan Tree Hotel in Bangkok and focused on “Less Feed, More Meat”, the new theme of Hubbard that will be introduced at the international Poultry Exhibition “VIV Asia” on March 13-15, 2013.



Focus on “Less Feed, More Meat”

Hubbard's focus on “less Feed, More Meat” is totally in line with the “Natural Concept” of Groupe Grimaud which was officially launched end of 2012, embracing the Groupe's philosophy on how to feed the world in the decades to follow in a sustainable way. It outlines the ways in which Groupe Grimaud and its companies develop and implement best practices in the genetic selection and production of animal protein to feed a growing world population.

Feed cost represents over 70% of live production cost of a broiler, the highest levels in history and will remain to be at a high level in the years to come. Hubbard's special focus in its genetic selection program on feed efficiency and total meat output has led to a product range offering the best answers to the poultry industry to save feed costs on breeder and broiler level.

- The “Feedsaver” concept of the JV and F15 breeders saves about 15% of feed to produce a broiler day-old-chick compared to conventional breeders.
- All Hubbard broilers have an excellent FCR compared to other breeds.

This allows customers to use less kg of feed to produce 1 kg of live broiler, 1 kg of carcass or 1 kg of total meat!

Recent successes shared

Recent successes of Hubbard around the world were shared with the many GP distributors being present, as Hubbard keeps

gaining market share in different parts of the world:

- **Hubbard LLC** in the USA reconfirms its on-going success with the Hubbard M99 breeder male in the largest broiler market of the world. The **Hubbard M99** breeder male represents now more than 50% of the broiler industry, supplying almost every poultry company in the USA.
- **Hubbard do Brazil** has been created just a few years ago from scratch and is currently experiencing an increasing success with the **Hubbard Flex**, which is now seen as the most feed efficient broiler in the second largest market in the world. Hubbard is now supplying more than 15% of the “free” Brazilian breeder market and the outlook for this year is already confirming a higher share in 2013.
- **The Feedsaver concept** using the “mini” (or dwarf) breeder females, such as the Hubbard JV and F15, has been accepted in many countries as a real economic alternative to conventional breeder females and now keeps gaining ground in some new markets in Europe, Africa, the Middle East and even the USA.
- Especially in hot(ter) climate regions the **Hubbard Classic** is gaining market share because of its excellent breeder performances, fast broiler growth and good FCR.
- **The Hubbard H1** is also being recognised now as a very good product for the heavier broiler markets and for the total de-bone markets focusing on the highest total meat yield per broiler, including breast meat, legs and wings.
- **The Hubbard Color Range** covers the needs for what is still considered being a niche market. On top of fulfilling the need for high-end quality chicken meat markets, it could also very well be a response to the consumers' demand to reduce the use of antibiotics in poultry.

Besides the growth of breeder sales from its own subsidiaries, Hubbard also confirms increased interest in its products through recently signed Grand Parent agreements in various parts of the world. For many years Hubbard is market leader in the Middle East, Africa and Russia with more than 50% market share and Hubbard's presence in Asia is also growing as next to the existing business several new GP agreements have been signed recently. There is more to come and there will be more to be announced in detail very soon!

> Hubbard Genetics as part of the Broiler Industry

On 25-26 March 2013, part of the main players in the French broiler industry met with the Hubbard team to discuss the main topics of today which will influence the future.



The main subjects focused on incubation, genetics, feed broiler management.

- Paul Degraeve, GM of PETERSIME shared the most recent developments of incubation and hatching.
- Yves Jego, Hubbard R&D Director, presented the work done on R&D-level within Hubbard. The Hubbard genetics team in association with the other R&D-teams within Groupe Grimaud have demonstrated what they have done for the products you see in the field today. Without giving all their secrets away on what will happen tomorrow, it is clear that the work done on feed conversion is showing its positive impact in the field and this will become even stronger in the near future. This leads to birds that are able to convert a minimum of feed into a maximum of total meat.
- Jacky Michard, Hubbard Production Director and Nutritionist, explained that the physical presentation of the starter feed remains to be a major issue. Jacky showed the most recent results of trials done with micro-pellets and the interest to use them is indisputable. He also discussed other subject such as breeder nutrition and the use of spin feeders in rearing.
- Claude Toudic highlighted his very interesting study showing the clear impact of certain environmental criteria on the expression of the genetic potential: lighting, temperature and ventilation do not only have a significant effect on the live performance of broilers but also on the meat yields.
- The first session was concluded by Frederic Grimaud giving Groupe Grimaud's vision on how to feed the world in the near future by following the newly introduced "NATURAL CONCEPT" of the group.

The second day was held in Roussay, the head office of Groupe Grimaud.

Part of the participants continued by listening to other presentations linked to feed, focusing on:

- Use of AVATEC and the dwarf gene
- Performances of the Label Rouge broilers using different feed programs
- Use of organic minerals

Other participants used this opportunity to visit the new laboratory of Hubbard's sister-company "Filavie" and an external visit of the composting site.

At the end of the meeting 2 R&D presentations were given by:

- Thierry Burlot, Novogen R&D Director, explaining that good genetic selection should result in the capability to get the best genetic potential adapted to field conditions. This method works very well and Novogen has proven this by its presence in already more than 50 different countries around the world, and there are some more to come. . .
- Bernard Retailleau, Grimaud Frères Sélection R&D Director, on his part showed the interest to use an "RFID"-based selection as a complementary tool to the already existing selection methods.

Everyone went home with the good messages and has been able to participate, exchange and listen to move forward together, because "the future is not what it used to be, but what we make of it".



> Hubbard F15: Hubbard Technical Seminar 2013 held in Turkey

"Using the Feed Saver Concept against high feed prices"

During May 2013 Hubbard held its first seminar in Izmir, Turkey. More than 60 participants, broiler and breeder managers from many different companies in the Turkish poultry industry attended the seminar organized by Bruno Briand, area manager of Hubbard, and Dr. Cengiz Güler, Hubbard Agent in Turkey. Also the technical team of Hubbard's new F15 GP distributor in Iran joined this seminar to share their positive experience with the Hubbard F15. The main theme was about using the "Feed Saver Concept" or the Hubbard F15 to lower the impact of the high feed prices the poultry industry is facing at the moment.

At the opening of the event Olivier Behaghel, Business Director Hubbard, welcomed the guests to the seminar and explained the rapid growth in sales of the Hubbard F15 breeders in Turkey. In the fast growing Turkish market, which is also facing the pressure of high feed prices, local producers using the Hubbard F15 are now taking

the full advantage of the higher output per m² of production surface as well as at the high level of savings in breeder feed and the excellent broiler performance. In Turkey the Hubbard F15 now has, like in many other countries such as Iran, confirmed its excellent results in feed conversion and liveability, leading to higher profitability of the integrated producers.

In total 8 lectures were given during the technical seminar. Much focus was paid to production management methods minimising the feed cost per kilogram of meat produced. The Hubbard F15 is the right genetic solution required by the Russian market today and Hubbard is constantly paying a lot of attention to these important needs for the future as well. Close cooperation between the market, the distributor and the R&D department guarantee that in the future genetic progress will continue to be converted into profit for the poultry producers.

The seminar extensively addressed the fact that the good productivity of the Hubbard F15 with a low feed intake enhances resource saving technologies with a positive effect on the overall economic outcome of a poultry integration. High prices for feed raw materials are expected to last at least until the next harvest. This situation only increases the interest of using the "Feed saver concept" of the Hubbard F15, allowing to produce more meat from each kilogram of feed than any other breed in Turkey in the current situation.



Good field results

In October 2009 the first flock of F15 breeders was placed in one of the major integrations in Turkey. The customer expressed that the performance of the Parent Stock was very good with around 141 chicks at 64 weeks of age and 8 birds/m² in the production house. One of the numerous advantages of the "Feed saver concept" is to allow for placing the birds at a higher density in production as the bodyweight of the females is lower than a standard female. Therefore, one can produce 20% more chicks /m². The other advantage is the lower feed consumption of the F15 PS which is around 10 kg of feed less than a standard breeder female. The result of this advantage is the lowest cost of production per chick which has been recognised by everybody in the market.

Moreover the broiler performance was outstanding with 5 points of FCR (at 2.2 Kg) less than the main competitor in the Turkish market. All those advantages have made this customer to decide to place more than 400 000 Hubbard F15 PS per year.

The success of the Hubbard F15 in Turkey continues with many other customers joining and it is not uncommon to see outstanding flock performances with 145 to 150 chicks at 64 weeks of age. The last data collected in 2013 from one integration in Turkey show the same positive trend in broiler performance as when we started with the F15 in Turkey. In comparison to another competitor with high number of broilers the FCR at the same body weight for the Hubbard F15 broilers is 6 points lower with a 1.6 % lower mortality rate.

	BREED	
Données	F915	Breeder A
N# Flocks	305	597
N# Chicks Placed	4 628 100	7 544 200
AGE	40,4	39,0
% Mortality	8,4	11,0
LW	2 177	2 157
ADG	53,8	55,1
AGE a 2200 g	40,7	39,6
FCR	1,75	1,80
FCR at 2200 g	1,75	1,81
EPEF	286	282

The main comments from our customers are excellent feed conversion and excellent liveability.

Hubbard is now placing more flocks with new customers everywhere in Turkey. And the fact that all current customer are re-ordering their flocks, is the real sign that the HUBBARD F15 is the product for the Turkish market which will allow the customers to make more profit. "Less feed more meat" is our slogan.

THEY RECENTLY JOINED US...

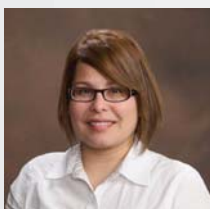


Suryo Suryanta joined Hubbard SAS Technical and Sales team

Suryo Suryanta has joined Hubbard on the 1st of November 2012 as Technical and Sales Manager.

Suryo graduated from the Faculty of Animal Husbandry, Gadjah Mada University in Yogyakarta-Indonesia in 1995. He has previously worked in the poultry breeding business in a number of countries in South East Asia and comes with an extensive experience from the poultry business to reinforce our customer support and after sales service.

Suryo will work for both Novogen and Hubbard companies. He is based in Jakarta, Indonesia and reports directly to David Fyfe, Business Director for Asia.



Norma Fernandez joined Hubbard LLC Customer service

Norma Fernandez joined Hubbard LLC as International Sales Coordinator responsible for sales coordination, health documentation & freight logistics to Latin America, Central America, Europe, Middle East, Africa and Asia.

Norma started on January 2nd and joins Hubbard LLC with nearly five years of bi-lingual (English & Spanish) International Sales Coordinator experience. She has managed International Accounts starting from customer inquiries, order confirmation to shipment documentation and freight logistics all the way through to payment reconciliation.

Norma resides in Tennessee and has a degree from Bergen County Community College in Paramus New Jersey. She reports to Jay Daniels – Director of Operations, working out of the Pikeville Tennessee Regional Customer Support Office.



Olivier LEON joined Hubbard SAS Technical Service team

Olivier is 35 years old. He obtained his DVM degree at Toulouse University in France in 2002.

He has developed skills in various fields of the poultry business through 1.5 year experience as a lecturer in avian pathology at Toulouse Veterinary University, 5 years as a researcher and senior technical manager in a bustard breeding project in the United Arabic Emirates (UAE), and 2 years collaboration in a French practice specialised in veterinary support to poultry operations (Cristal Group).

After his integration period within the Company, Olivier will support Eric Bonjour in managing the health and export administrative questions. He will also join the technical team and provide technical advice to our customers worldwide.

Olivier is based in Hubbard Head Office in Quintin and reports to Eric Bonjour – Director of Hubbard Veterinary and Technical Services.



Pierre SIMONET joined Hubbard SAS Technical Service Team

Pierre is 24 years old; he is Agronomist Engineer and has been interested by Poultry Industry for a long time. He has several experiences in our business in particular through Marketing, Selection and Nutrition aspects.

Under the responsibility of Claude TOUDIC, he will be trained for several months in Breeding and Hatcheries within both Hubbard and Novogen companies. He has also the responsibility to update the presentations of our products. In the coming months, Pierre will travel in Asia and EMEA areas to bring sales and technical support to our team and customers.

Pierre is based in Hubbard Head office in Quintin and reports to Claude TOUDIC – EMEA & Brazil Technical Manager.



Pauline Brenaut joined Hubbard SAS Research & Development Department.

Pauline is 28 years old and is an Engineer with a Doctorat in Life Sciences.

Under the responsibility of Yves Jego Hubbard R&D Director, Pauline discovered our selection processes in Chateaubourg before starting a training time in Walpole during seven months. She will be back to Chateaubourg in March 2014 to be in charge of the selection program for part of the Lines.

She will then be based in Chateaubourg - France, within the R&D Department.



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AMERIQUES

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