Cobb 700

Product Profile

Cobb 700 Breeder

Ten years of research to develop Cobb 700

The Cobb 700 has been introduced to meet the increasing demand not just for more breast meat, but for breast meat produced at the lowest cost.

The need to develop a new type of product devoted to maximum meat yield at high broiler weights was identified in the early 1990s. Meat yield would be the target, but the chicken must also carry the Cobb trade marks of outstanding broiler feed conversion, excellent livability and low cost of production.

The development during more than ten years has involved starting new lines, new selection methods and a new set of breeding goals. It has benefited from Cobb's increasing investment in research during this period, totalling more than $200 million and reflecting the value which the parent company, Tyson Foods Inc, places on breed development.

Families from the highest-yielding Cobb lines were chosen to begin new synthetic lines which were placed on an annual reproduction program on one of the state-of-the-art pedigree farms.

Breeder Performance

Age at depletion	(weeks) (days)	60 420	65 455
Age at 5% production	(weeks) (days)	24 168	24 168
Total eggs/hen housed		155.2	170.3
Hatching eggs/hen housed	(50g minimum)	149.7	164.3
Peak hatchability	(%)	91	91
Average hatchability	(%)	86	85
Broiler chicks/hen housed		128.4	139.8
Livability from day-old to depletion	(%)	92	91

Global Cobb 700 Performance (to 65 weeks)

Top 3 flocks by Total Eggs	
Target	**170.3**
Flock A	174.1
Flock B	171.3
Flock C	170.4

Top 3 flocks by Hatching Eggs	
Target	**164.3**
Flock D	168.7
Flock E	163.3
Flock F	162.6

Top 3 flocks by % Hatch	
Target	**85.00**
Flock G	85.60
Flock H	85.60
Flock I	85.50

Top 3 flocks by Chicks	
Target	**139.8**
Flock J	136.7
Flock K	136.6
Flock L	132.9

New innovations in genetics and in management were needed. Floor area, for example, was increased to give individual birds more room to grow to heavier weights, and feeding programs were adjusted to encourage egg production.

Egg numbers, egg quality, fertility, hatchability, livability and chick quality information on each hen and her offspring were added to a growing genetic database. Computer programs were enhanced to improve breeding value estimation for all valuable traits for each individual and to permit selection of birds with the optimum combination of each trait.

Even with selection pressures aimed at increased meat yield, the breeder is achieving competitive production levels. Cobb 700 parent stock became available in 2001 and has been supplied to customers worldwide.

Cobb 700

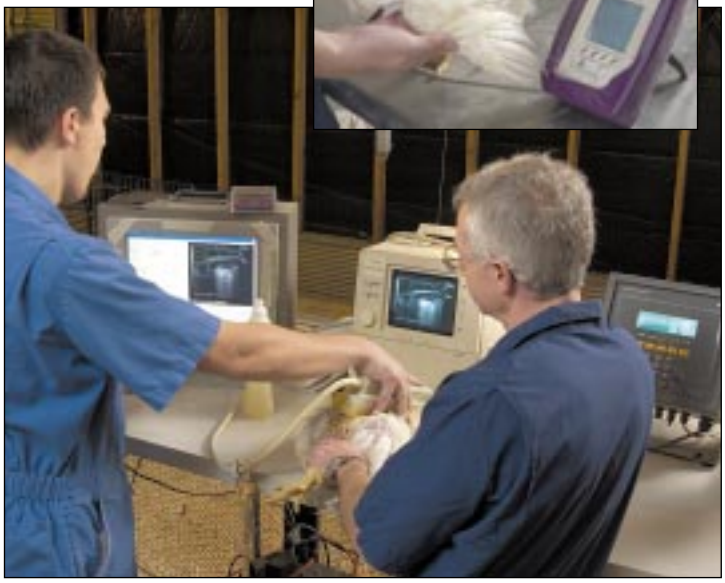
Lowest cost total deboned meat

The Cobb 700 is a unique product genetically designed for the high meat yield, deboning market and capable of maximizing profits from processing.

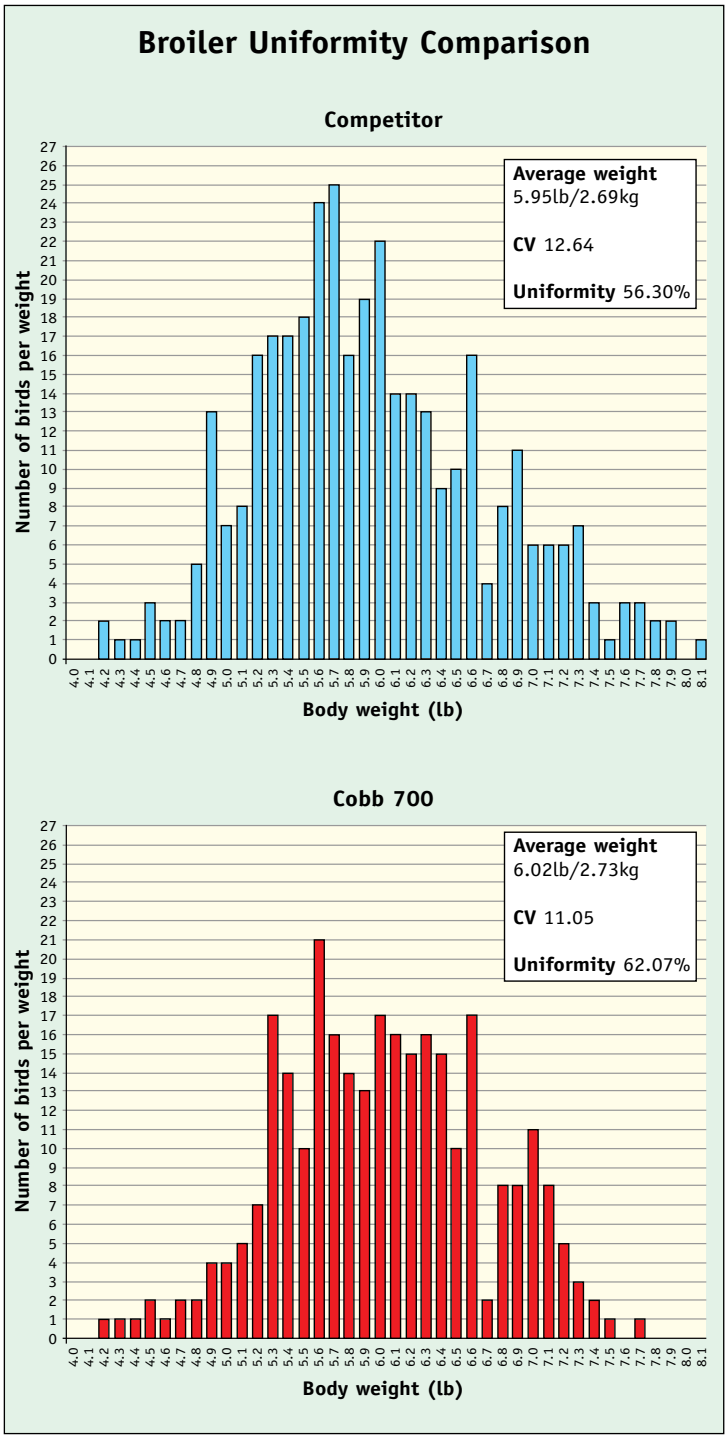
In developing the Cobb 700 geneticists have achieved very similar growth rates and feed conversions to the Cobb 500. Field livability is excellent even at large bird weights.

Most important of all, breast meat yield of the Cobb 700 broiler is a full one percent higher and this extra yield is achieved at the industry's lowest cost of production for this type of chicken.

The good health and vitality of the broiler, reflected in leg strength and good early skeletal development is the result of 20 years of research techniques pioneered by Cobb. Since 1989 Cobb geneticists have been using oximeters for measuring blood oxygen saturation to assess the physiological health of individual birds and pedigree lines. Ultra-sound and other body imaging technologies have been developed specifically to study bone and muscle development in chickens.



Genetic markers and DNA profiling are used to verify the presence of individual genes, providing a new level of precision in selection and advancing the pace of progress. Above all, the emphasis is placed on selecting birds from families that exhibit outstanding health traits - excellent livability, strong legs and skeletal frame, resistance to ascites, high overall immune response and good feather cover.



Commercial Broiler and Yield Trial Comparisons

Comparison 1

Breed	Age	Weight (lb)	Weight (kg)	FCR	Breast Yield (%)
Cobb 700	59	7.475	3.391	2.135	22.36
Breed B	59	7.296	3.309	2.154	21.89

Comparison 2

Breed	Age	Weight (lb)	Weight (kg)	FCR	Breast Yield (%)
Cobb 700	54	7.095	3.218	2.025	22.57
Breed C	54	6.958	3.156	2.043	22.29

Comparison 3

Breed	Age	Weight (lb)	Weight (kg)	FCR	Breast Yield (%)
Cobb 700	57	7.403	3.358	2.109	22.08
Breed C	57	7.036	3.192	2.192	21.96

Breast yield shown as a percentage of liveweight

Value of meat yield and uniformity to the processor

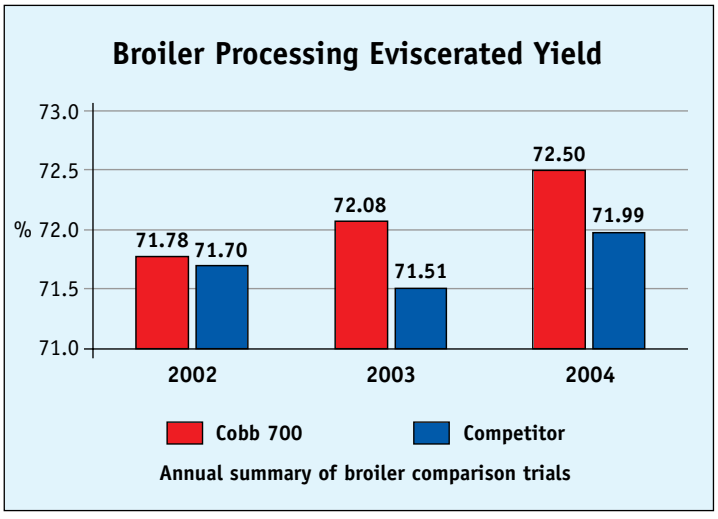
High meat yield, particularly from breast portions, is desired by an increasing number of customers serving added-value markets. The Cobb 700 has been developed specifically to provide the highest output of breast meat at the least cost.

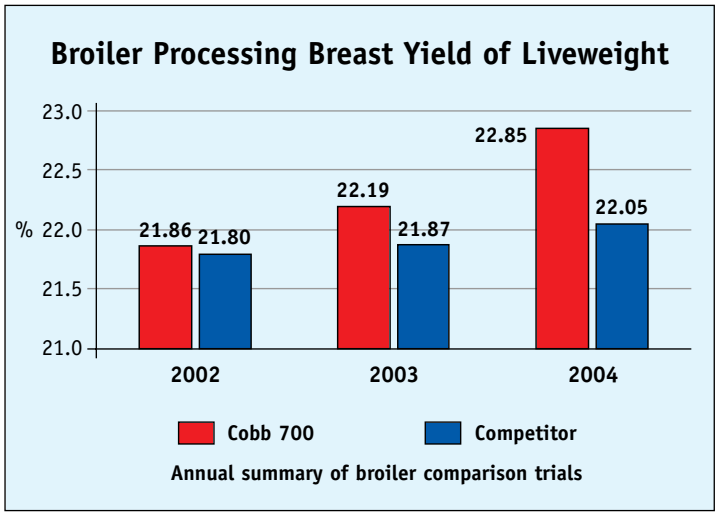
On the processing line the Cobb 700 is becoming renowned for the characteristics which have made the Cobb 500 the world leader - carcass uniformity as well as high meat yield. These factors contribute to a high and predictable 'saleable yield', valuable to customers in reducing 'give away' when products are provided to meet a specific price rather than weight range.

Cobb geneticists are selecting for more than yield and carcass conformation. Meat quality is becoming ever more important. The Cobb meat quality laboratory is measuring family fillet weights, thickness, skin and meat color, texture, fat trim and body fat.

Advanced imaging technology has replaced much of the need for bird dissection - helping to accelerate progress and achieve the carcass consistency which processing plants expect from Cobb broilers.

As the tables indicate, the superior breast meat yield of the Cobb 700 against the competition is shown by the relative differences year-on-year since the breed was introduced.





Bottom Line

Cobb 700

Compete by driving down cost

Cobb geneticists have concentrated on improving traits which have the greatest impact throughout integrated chicken production.

In today's increasingly global market, our industry is having to compete strongly on price and value-for-money. Margins, and ultimately costs, will continue to be under pressure. We believe we must keep our focus on the 'bottom line' impact of our breed - not just one segment of the production cycle. We're confident that this strategy best serves our customers today....just as it will in the years to come.

Cost of production is the issue that drives poultry businesses the world over. The example, below, shows the top 10 from 29 companies ranked by cost/liveweight.

Companies Ranked by Cost/Liveweight

Rank	Cost/lb ($)	Weight (lb)	Weight (kg)	Age (days)	FCR	EEI
1	0.2515	6.05	2.742	49	1.75	**310**
2	0.2539	5.94	2.692	49	1.96	**270**
3	0.2551	6.15	2.788	50	1.90	**282**
4	0.2566	5.81	2.633	49	1.96	**262**
5	0.2589	6.26	2.838	52	1.99	**262**
6	0.2594	6.47	2.933	49	1.93	**294**
7	0.2622	6.05	2.742	53	2.00	**247**
8	0.2627	5.72	2.592	51	1.97	**246**
9	0.2640	5.77	2.615	50	1.98	**251**
10	0.2644	6.38	2.892	52	1.99	**267**

Companies Ranked by EEI

Rank	Cost/lb ($)	Weight (lb)	Weight (kg)	Age (days)	FCR	EEI
1	0.2515	6.05	2.742	49	1.75	**310**
6	0.2594	6.47	2.933	49	1.93	**294**
29	0.3554	5.68	2.574	44	1.93	**288**
18	0.2713	5.60	2.538	47	1.84	**282**
3	0.2551	6.15	2.788	50	1.90	**282**
23	0.2788	5.45	2.470	45	1.90	**282**
28	0.3002	5.31	2.406	44	1.91	**274**
2	0.2539	5.94	2.692	49	1.96	**270**
22	0.2765	5.29	2.397	46	1.86	**269**
21	0.2748	6.17	2.797	51	1.96	**268**

The European Efficiency Index (EEI) is used in some areas as a benchmark for broiler performance. It is a calculation that takes into account the key performance indicators. However, when competing in a global market, cost competitiveness is the most important factor.

In the table above, the same results are shown but this time ranked by EEI. The company with the worst cost/liveweight actually had the third highest EEI.

In the integrated chicken business no single discipline dictates the profitability of an organization.

Factors influencing the overall 'bottom line' cost start at the breeder rearing house and finish after the product leaves the processing plant.

Principles of an economic model

The best method to determine the effects of each discipline on overall profitability of a business is to employ a simple economic model.

This is designed to make cost calculations based on the production variables as they are changed. One advantage of using an economic model is that it highlights the relative effect of different performance traits and cost factors. It is then easy to identify factors that have a major influence on 'bottom line' profitability - such as feed conversion, feed price or total deboned meat yield. Other factors such as reproductive performance can then be put in perspective, as they have a lesser effect in integrated chicken production.

Bottom Line

Cobb 700

Number of broilers processed per week	1,000,000	1,000,000
	Cobb 700	Competitor
Breeder		
Chicks per breeder to 65 weeks of age	126.0	135.0
Broiler growing		
Broiler Weight lb (kg)	7.47 (3.391)	7.29 (3.309)
Average feed price per US ton	$190.00	$190.00
Feed conversion	2.135	2.154
Cost per lb liveweight	$0.224	$0.227
Cost per kg liveweight	$0.494	$0.500
Processing		
Eviscerated carcass yield	72.50	71.99
Breast meat yield (% liveweight)	22.85	22.05
To process 1,000,000 Broilers per week		
Annual Breeder production costs	$11,470,700	$10,891,370
Broiler growing costs	$87,138,514	$86,029,988
Processing plant costs	$38,350,000	$38,350,000
Total income	$175,318,708	$166,481,365
Annual profit	**$38,359,494**	**$31,210,007**

- The table above is based on industry data and is an illustrative example.
- The currency in the above table is in US Dollars.

By using Cobb's economic model, this example shows the dynamics of breeder and broiler performance as well as the importance of meat yield.

As the model indicates, the Cobb 700's outstanding performance provides the greatest return to an integrator requiring the least cost breast meat yield.

Helping customers take full advantage of the Cobb 700

Cobb's philosophy is not only to provide top quality broiler breeding stock, but to enable customers to maximize their investment by managing their poultry assets.

The Cobb World Technical Support Team was developed in 1998, bringing together leading experts in each aspect of chicken production. The team now covers animal health, nutrition, environment, breeder, broiler and hatchery production, processing and data analysis. Working alongside Cobb's regional technical service teams, they provide support and assistance for Cobb customers worldwide.

The data in this publication are based on actual field performance and trial information.

We're Cobb

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