

# PRODUCT FOCUS

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## MAKING THE BREED DECISION

BY JERRY MOYE, VICE PRESIDENT, COBB-VANTRESS

There are few decisions facing members of our industry as important as the selection of the genetic stock for their business. The choice will affect all phases of poultry operations. This being said, the actual business transacted by a company needs to be the cornerstone for the decision process.

In this article, the breed choice will be looked at individually in each section of production (breeding, broiler grow-out, and processing). Cobb realizes that in some parts of the world, the genetic choice is made based on single components of the integrated model. However, this discussion will attempt to look at how each production segment relates to another and why this may affect the decision of a business involved in only one production segment.

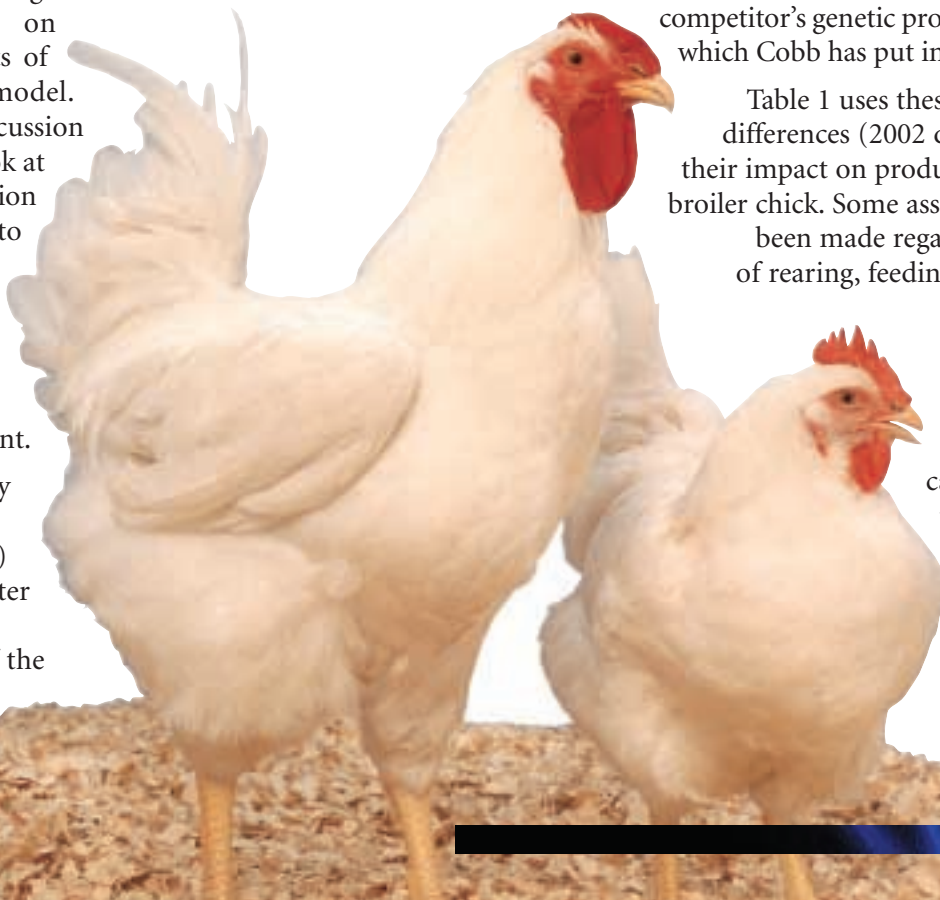
While Cobb may have products (Avian, Cobb 700) which may be better suited for an individual part of the production

model, this discussion will analyze the Cobb 500 at each level of production against our major competitor in today's marketplace.

### BROILER CHICK PRODUCTION

Naturally, breeder hen performance as well as fertility and hatchability are the most important factors in this part of the business. Charts 1 and 2 show how the Cobb 500 has performed compared to our competitor over the last four years. It appears that more emphasis has been put on egg production in our competitor's genetic program than that which Cobb has put in the Cobb 500.

Table 1 uses these performance differences (2002 data) to look at their impact on producing a day-old broiler chick. Some assumptions have been made regarding the costs of rearing, feeding, and housing the breeder hen in this calculation. From the calculations, it can be seen that the competitor produces a cheaper broiler chick than the Cobb 500.



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For a company producing 1,000,000 broiler chicks per week, this would mean an annual advantage of \$400,000 from the use of the competitor's product.

For an individual whose business is day-old broiler chick sales, it may appear that it is an easy decision at this point. If this is your priority, then Cobb's Avian product line should be of interest. However, your customers (Broiler producers) will be very interested in the following analysis.

### BROILER PRODUCTION

Broiler performance trends over the last three years can be seen in the data presented in Table 2. During the period in which the difference in egg production increased between the Cobb 500 and its' competitor, an interesting pattern has emerged in the broiler house. The table represents year-to-year annual performance from a single broiler company in the U.S. In 1999, the Cobb 500 had a slight advantage in feed conversion at a common weight standard. By 2001-2002, this advantage has tripled in size as shown in Chart 3.

Table 3 combines the chick cost data from Table 1 and uses the 2002 broiler field performance to calculate the cost of birds arriving to the processing plant. It can be seen that despite the chick cost disadvantage, the Cobb 500's superior weight, livability, and feed conversion translates into the cheapest broiler cost. For a company killing 1,000,000 broilers per week at 4.50 pounds (2.05 kg.) this savings is equal to \$650,000 per year. Even the day-old chick seller needs to pay attention to this effect on his customer's business. Logic would say that his clientele would be willing to pay a higher price for this performance potential.

Chart 1. Breeder Performance Egg Production

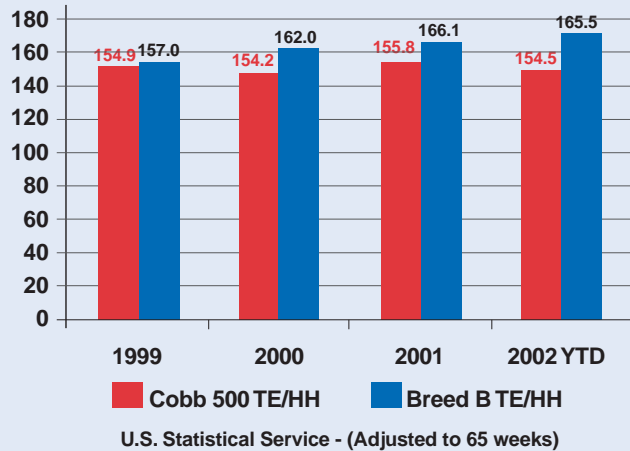


Chart 2. Breeder Performance Hatchability

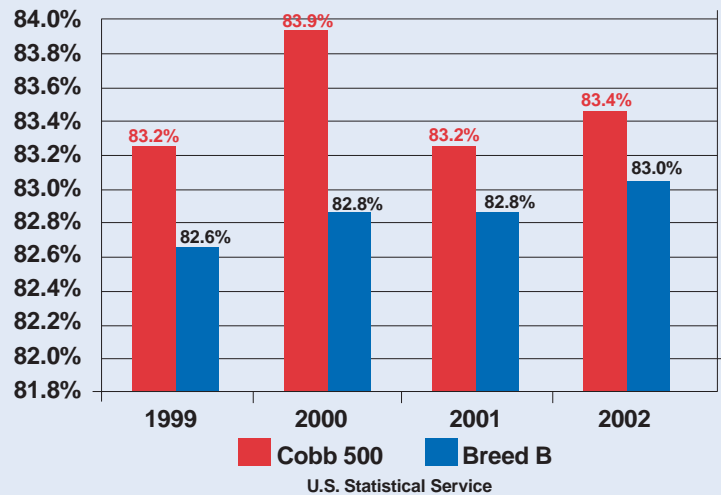


Table 1. Chick Cost Calculation

		Cobb 500	Breed B
Hatching Eggs/HH		154.5	165.5
Pullet Cost	\$6.70	\$0.0434	\$0.0405
Feed Cost (90#/hen @ \$.075)	\$6.75	\$0.0437	\$0.0408
Housing Cost	\$4.55	\$0.0294	\$0.0275
Egg Cost		\$0.1165	\$0.1088
Hatch %		83.0%	82.5%
Chick Cost		\$0.1404	\$0.1318

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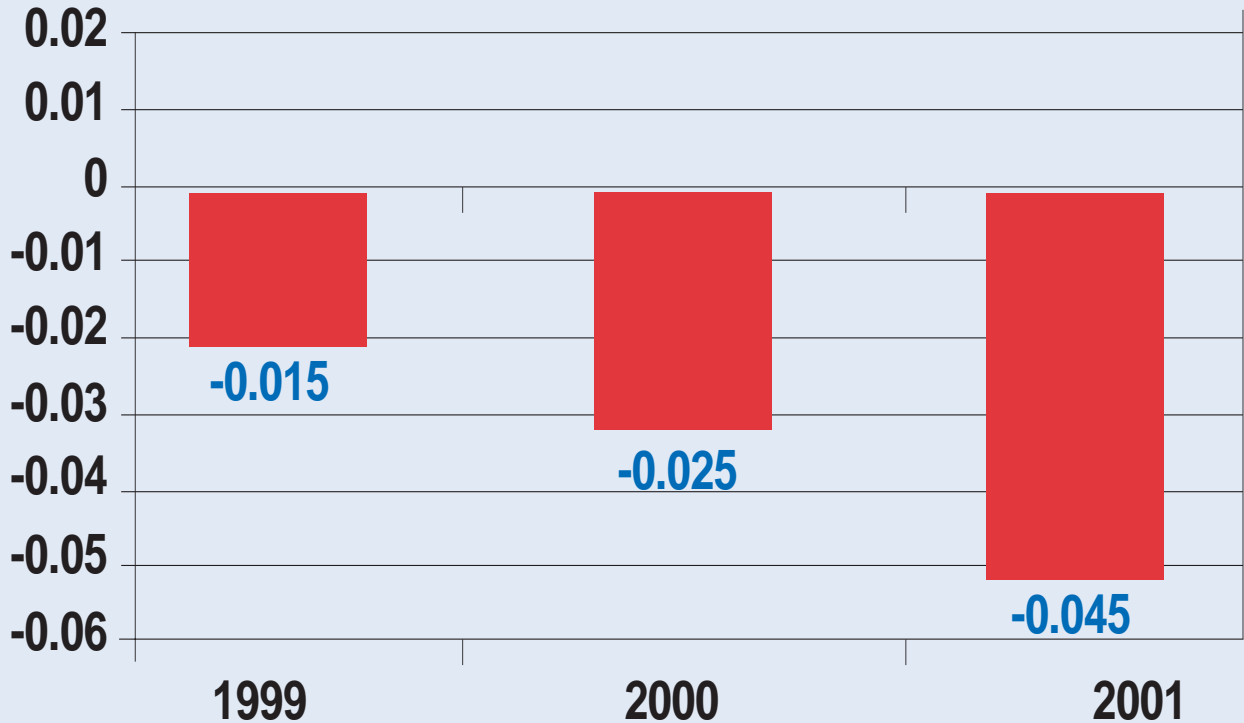
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**Table 2. Broiler Performance Trends**

Period	Breed	Head	Age	Livability %	Weight		FCR	FCR @5.00	49 Day Wt.	
					lb.	kg.			lb.	kg.
3/99-3/00	CxC 500	12,031,400	49.53	96.12	5.16	2.35	1.98	1.953	5.10	2.32
	Breed B	3,741,100	50.99	95.77	5.13	2.33	1.99	1.968	4.93	2.24
5/00-5/01	CxC 500	3,482,500	49.51	94.42	5.03	2.29	2.03	2.025	4.98	2.26
	Breed B	3,452,500	49.34	95.16	4.88	2.22	2.03	2.050	4.85	2.20
6/01-6/02	CxC 500	1,059,500	49.28	95.90	4.99	2.27	1.97	1.972	4.96	2.25
	Breed B	1,939,000	50.16	93.63	5.02	2.28	2.02	2.017	4.90	2.23

Annual broiler data-SW Broiler Company

**Chart 3. Feed Conversion Difference between Cobb 500 and Breed B**



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	<b>Cobb 500</b>	<b>Breed B</b>
<b>Broiler Performance 2002</b>		
Age	49.3	50.2
Livability %	95.90%	93.63%
Weight (lb.)	4.99	5.02
Weight (kg.)	2.27	2.28
FCR @ 49 Days	1.97	2.02
<b>Broiler Cost</b>		
Chick Cost	\$0.1404	\$0.1318
Chick Cost/lb	\$0.0293	\$0.0281
/kg.	\$0.0645	\$0.0618
Feed Cost/lb.@	\$0.080	\$0.1616
/kg.@	\$0.176	\$0.3555
<b>Total Chick &amp; Feed/lb.</b>	<b>\$0.1869</b>	<b>\$0.1897</b>
<b>Total Chick &amp; Feed/kg.</b>	<b>\$0.4112</b>	<b>\$0.4173</b>



### BROILER PROCESSING

Ultimately, processing is the end point for the majority of Cobb 500 customers. This is the last step in the integrated model, and a point in which the genetic trait of yielding meat has the key impact. As done in the previous phases of production, Charts 4 and 5 put forward the patterns of meat yield (total and breast) exhibited by the Cobb 500 and its' competitor over the last four years.

Table 4 takes the data from 2002 and combines it with our broiler calculation (we now have a complete analysis from the breeder hen through the processing plant). The analysis in Table 4 shows that the Cobb 500, fueled by the steady progress of the broiler and meat yield genetic programs, is demonstrating a clear advantage to the processor. For a company killing 1,000,000 birds at 4.5 pounds (2.05 kg.) per week the annual improvement from using the Cobb 500 has now grown to \$1,200,000 if processing whole birds, or \$2,200,000 if de-boning breast meat. These returns are in spite of the fact that the Cobb 500 started with the broiler chick cost disadvantage.

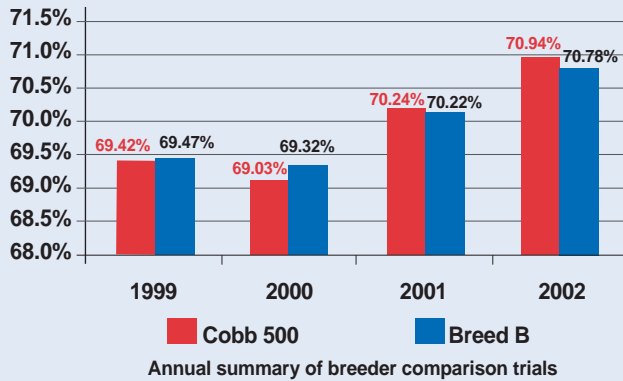
<b>Cost of Meat</b>	<b>Whole Bird</b>		<b>Breast Meat</b>	
	<b>Cobb 500</b>	<b>Breed B</b>	<b>Cobb 500</b>	<b>Breed B</b>
Broiler live cost/lb.	\$0.1869	\$0.1897	\$0.1869	\$0.1897
Broiler live cost/kg.	\$0.4112	\$0.4173	\$0.4112	\$0.4173
Yield %.	70.94%	70.78%	21.43%	21.14%
Broiler live cost/lb. of meat	\$0.2635	\$0.2680	\$0.8721	\$0.8974
Broiler live cost/kg. of meat	\$0.5796	\$0.5896	\$1.9187	\$1.9742
<b>Revenue Potential</b>				
Saleable meat per 4.5lb. bird	3.19	3.19	0.96	0.95
Saleable meat per 2.05kg. bird	1.45	1.45	0.44	0.43
Meat value (\$/lb.)	\$0.50	\$0.50	\$1.30	\$1.30
Meat value (\$/kg.)	\$1.10	\$1.10	\$2.86	\$2.86
Income per bird	\$1.5962	\$1.5926	\$1.2537	\$1.2367
Meat cost per bird @ 4.5lb. (2.05kg.)	\$1.1856	\$1.2061	\$0.8721	\$0.8974
<b>Gross Margin per bird</b>	<b>\$0.4106</b>	<b>\$0.3865</b>	<b>\$0.3815</b>	<b>\$0.3393</b>

In summary, Cobb's geneticists have concentrated on improving the traits of the Cobb 500 which will have the greatest impact throughout the integrated production model. In today's ever-shrinking world market, our industry is finding stronger competition for meat sales. Margins, and ultimately costs, will continue to be under pressure. We at Cobb believe we must keep our eye on the bottom line impact of the Cobb 500, not just on one segment of the production cycle. We are confident that this strategy serves our customers well today, just as it will in the years to come. ■

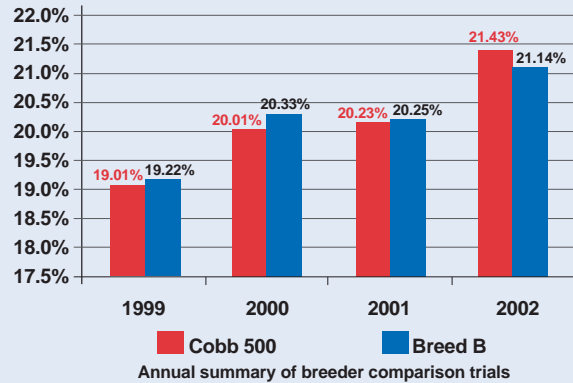
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**Chart 4. Broiler Processing Eviscerated Yield**



**Chart 5. Broiler Processing Breast Yield of Live Weight**



# EUROPEAN EFFICIENCY INDEX AND BROILER LIVE COST

BY WINFRIED BAKKER

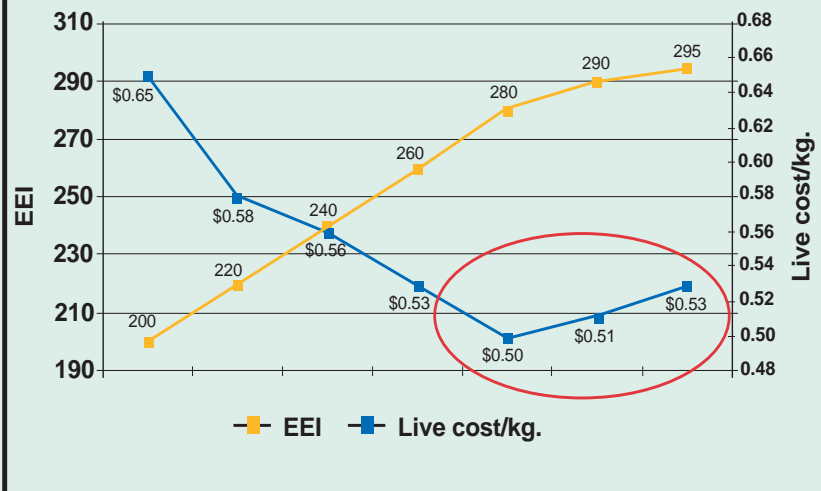
Integrations throughout many parts of the world use the European Efficiency Index (EEI, or PEF in some areas) as a benchmark for their performance, as well as a tool for measuring broiler grower performance. The key factors involved in the EEI, growth rate (GPD), feed conversion (FCR) and livability are universal measures used for evaluating broiler performance.

Chart 6 shows that, to a point, the EEI and broiler live cost has a direct inverse relationship. This should be no surprise since we all know that higher GPD and lower FCR will normally bring lower costs. However, growth rate and FCR are somewhat responsive to feed nutrition. As a company chooses to increase the nutrient density of its' broiler diets it will see a response in performance. Depending on grain and other ingredient prices this can mean lower cost per pound of live weight.

However as our chart shows a point can be reached where the increase in nutrient cost does not translate to a lower cost, even though the EEI continues to increase.

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**Chart 6. EEI and Broiler Live Cost**



## EUROPEAN EFFICIENCY INDEX AND BROILER LIVE COST (CONT'D)

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Herein lies the problem with the EEI. In the world market today, producers from a variety of regions may compete with one another for sales. A high EEI does not guarantee that a company will be a low cost supplier. Table 5 makes a comparison of EEI values for various countries in the world. It can be seen that while Brazil and the United States are recognized as the low cost producers, they do not necessarily have the highest EEI.

Like many tools for production managers in our industry the EEI has a place. However, for those competing in International markets it is important to be aware of your cost competitiveness.

**Table 5. World Performance Factors**

Country	Age	Weight (kg)	Growth Rate (g/day)	FCR	Livability %	EEI
Holland	43.0	2.22	51.5	1.71	96.9%	293
UK	42.7	2.32	54.2	1.86	95.5%	279
Australia	40.5	2.10	51.7	1.81	95.2%	272
Germany	38.4	1.94	50.6	1.80	96.0%	270
South Africa	37.8	1.73	46.1	1.78	95.5%	246
Venezuela	42.5	1.89	44.4	2.03	94.4%	245
USA	47.4	2.34	49.4	1.95	95.4%	242
Brazil	42.6	2.05	48.9	1.93	96.2%	241
Japan	53.0	2.82	53.3	2.11	95.1%	240
Argentina	53.6	2.63	49.0	2.21	92.7%	206

Jerry Moye, Vice President for Cobb-Vantress, has worked in various capacities since joining the company in 1991, including serving as General Manager and Director of Technical Service. Prior to joining CVI in 1991, Jerry was with Showell Farms from 1975-87, where he started in Feed Ingredient Purchasing and worked his way up to Vice-President of Live Production. His

responsibilities included breeders, hatcheries, broilers and feed mills.

In 1987, he joined Zacky Farms of California where he was Director of Live Production, until joining CVI in 1991. From 1991-93, Jerry served as CVI's Technical Service Representative in the Southeast region of the U.S.

Jerry is married with two children and lives in Arkansas.



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