By Jeffrey Kluger Thursday, Jul. 08, 2010
This year, like every year, has been a busy one for America's chickens. What the birds lack in smarts they make up for in work ethic, laying about 78 billion eggs annually (or 6.5 billion dozen), supplying a $7 billion industry. GM should be doing so well. Like any other workers, hens turn out economy, premium and luxury products • known as factory, cage-free and organic eggs • and consumers pay accordingly. A recent survey conducted in one random city • Athens, Ga. • found factory eggs going for $1.69 per dozen, cage-free for $2.99 to $3.59, and organic for $3.99 to a whopping $5.38. But it's worth it to pay more because you're getting a healthier product, right? Wrong. Most of the time, according to a just-released study by the U.S. Department of Agriculture (USDA), the eggs are indistinguishable. When there is a difference, it's often the factory eggs that are safer.
(See pictures of chefs at work in the fields where their food is grown.) The study, led by food technologist Deana Jones, was not designed to explore the question of which egg-laying conditions are best for the hens themselves • simply because there is no question. Factory hens are confined in what are known as battery cages, which leave them crowded and all but immobilized, reduced to little more than egg-laying machines. Free-range and organic chickens have different degrees of freedom to move and are raised on varying levels of higher-quality feed. There's no question what kind of life the birds prefer. What Jones and her colleagues wanted to learn is whether a happy hen in fact produces a better product. To do that, they relied principally on something known as the Haugh unit • a highly specialized egg-quality metric developed by food technologist Raymond Haugh in 1937. The white of an egg is where all its protein is found; it's made of both thin albumen • the watery fluid that runs farthest from the yolk when the egg is cracked into a cold pan • and thick albumen, the more viscous fluid that stays closer to the middle. The greater the amount of thick albumen, the more nutritious the egg.
(See TIME's special report on food labels.) "The Haugh unit factors together the weight of the egg and the thickness of the albumen layer at the center," says Jones. And that number, she found in her study, is not affected a whit by how a hen is raised. "We found no meaningful differences at all," she says. "We sampled eggs from a number of stores and kept getting the same results over and over. For shoppers, the decision comes down to your ethical and moral choices." That, at least, is all that's involved when it comes to egg nutrition. But what about safety? Don't organic eggs have the edge in terms of antibiotics and other contaminants? Surprisingly, the USDA has not devoted a great deal of study to the antibiotic question, mostly because the drugs are used sparingly in the egg-laying industry • at least compared with the cattle industry, in which even healthy animals are kept dosed to prevent infections.
(See pictures of what makes you eat more food.) "There's just very little research I've seen on this," says USDA immunologist and microbiologist Peter Holt. "Hens are not routinely treated with antibiotics, though they may be if they're sick." In those cases, the eggs the birds produce lose their organic designation temporarily, until the drugs have cleared their systems. The bigger problem comes with the environmental contaminants, and here the factory eggs have the edge. Research in both the U.S. and the E.U. has shown that free-range chickens have higher levels of PCBs, simply because they get out more and can peck almost anywhere. "There was a study in California of a free-range or organic farm with a wood-processing facility nearby," says Holt. "The chickens there had 100 times the PCB level of battery-cage chickens." A

Brazilian study found something similar with DDT, even though the pesticide, which is slow to degrade, hadn't been used in the area in nine years. "You really have to know the history of the land before you can be sure it's safe," Holt says. Another mistake some health-conscious consumers make • though it doesn't take the new USDA study to reveal it • is believing that the color of an egg makes a difference and that brown shells are somehow better than white ones. They're not. Color is determined entirely by the breed of chicken laying it, and the fact that brown eggs often cost a little more has nothing to do with quality. "It simply takes more feed to get a brown-shell species to lay," says Jones. "You're paying that additional production cost." As in any other industry, when the workers get a raise • even if it's chickenfeed • you'll see it on the price tag. Source: http://www.time.com/time/health/article/0,8599,2002334,00.html?artId=2002334?contType=article?chn=sciHealth