The French adore Woody Allen. And although each new Allen film is greeted with delight by France’s cinema-goers, one of his pearls of wisdom is not likely to find much favor with a country proud of its culinary heritage. It is safe to say that Allen’s declaration “I will not eat oysters. I want my food dead. Not sick, not wounded…dead” would find little support among the French. France produces 80 percent of Europe’s oyster crop, and consumption, particularly at Christmas and New Year’s, is a question of national pride. Figures released by OIFMER, France’s institute of those who earn their living by selling shellfish and other marine products, show that the French produce more than one hundred thousand tons of oysters a year but export only just over six thousand tons.1

Oyster eating in France is a well-established tradition. When the Romans conquered Gaul, they exported back to Rome the oysters they found along the northwest coasts of Brittany and Normandy. Throughout France, along the route taken by the Roman convoys, saltwater reservoirs were used to store the oysters during their journey to the empire’s capital in Italy. The commercial farming of oysters in France did not begin until the nineteenth century, but already in the seventeenth century Louis XIV was singing the praises of this particular delicacy.

Now, a recent scientific development may well alter the country’s love affair with this bivalve mollusk. A new type of oyster has been produced by crossing a natural oyster, which has two sets of chromosomes, with a laboratory-produced variety with four sets of chromosomes, known as a tetraploid. The result is a triploid oyster that contains three sets of chromosomes. The reasons for this manipulation become clearer when one learns that the triploid oyster is sterile. Those who revel in the seasonal comings and goings that the gastronomic world can offer tend to stick religiously to the adage that one should eat oysters only during the months that have an “r” in their names. Consequently, from May to the end of August, the oyster is less in demand. During the summer the oyster’s reproductive system goes into action; its exertions render the mollusk milky and its flesh thinner. The triploid oyster changes all that. Because it is sterile, it devotes no energy whatsoever to reproducing and so puts on weight throughout the year. Indeed, it gains its greatest weight during the summer months.

On the basis of pure taste, consumer tests have shown that this all-year-round oyster with its flesher appearance has got what it takes to please the market. It also meets with oyster farmers’ approval, as it grows one and a half times faster than the traditional oyster. The new variety is already on sale in France and accounts for about 15 percent of the nation’s total oyster sales. But its arrival has raised the delicate question of genetic engineering. Not itself being a GMO, the oyster does not need to be labeled to inform consumers of its origins. When a French consumer rights association2 argued that the origins of the oyster should be made known,
the French Ministry of Agriculture reiterated that existing legislation prevents a foodstuff produced by natural fertilization from being labeled a GMO—even if a genetically modified organism was used in the process. The French are therefore buying and eating the triploid product without necessarily knowing that they are doing so.

Even before this unsuccessful legal case was brought to the bar, the standoff between the oyster traditionalists and modernists had been gathering steam. Those who were against the new year-round mollusk felt that it sacrificed the noble oyster on the altar of convenience foods. Its supporters, by contrast, viewed the development of the triploid as a real opportunity to breathe new life into a market that was at risk of stagnating.

Debates may rage, but whatever the views of these two groups, the ultimate success or failure of a foodstuff depends on the consumer. With that in mind, a research team from one of France’s top business schools set out to gauge French oyster eaters’ reaction to the chromosome-heavy variety.

Since 2000, at the Audencia Nantes School of Management, less than an hour’s drive from the oyster-producing Atlantic coast of France, the LESMA research laboratory has been studying into our perception of food. The bulk of this work is undertaken for government ministries, professional bodies, or industries. The seeds of the LESMA lab were sown in the mid-1990s, when the first work on food risks was commissioned. Because classic marketing analysis failed to explain why the public rejected certain foods, a whole new field of research—how tastes are formed—was established. The multidisciplinary approach involves psychology, marketing, sociology, and anthropology. This work has since developed into a series of externally funded projects that try to better understand the notion of taste and thus improve the tools used for the marketing of food.

LESMA had already investigated the public perception of rabbit meat, and the approach used in that study formed the basis of the oyster project. This entailed not only in-depth, individual interviews but also group meetings based on tasting sessions. The resulting survey produced a wealth of personal reactions that give insight into what makes the oyster consumer tick.

Before tackling the fraught question of the triploid mollusk, it should be stressed that the oyster is a foodstuff that enjoys a very strong image, partly due to the fact that it is one of the only foods consumed, for the most part, live and raw. Thus, as Woody Allen so accurately observed, the oyster possesses two of the well-documented characteristics that cause eaters to reject it: it is both raw and slimy. The survey showed that among those who appreciate oysters, the question of texture is not important. What interests these consumers is the opportunity to eat the freshest product possible, on the theory that this freshness allows them to reap the full benefit of the virtues of the foodstuff and its origin. This view is summed up by one of the interviewees, who remarked, “When you swallow an oyster, it’s like drinking the sea. It makes you think of walking on the beach with the spray, the smell of the sea and the salt.”

This notion of being able to consume part of the sea has another meaning, too. The ocean has always been seen as a source of fertility, and the oyster’s sexual symbolism, evoked by its very form, was a recurring theme among the males surveyed. In remarks scarcely veiled in potent sexual connotations, one man went so far as to state, “I prefer the fleshiest ones: they’re more sensual. They make me think of something carnal.”

Although the oyster elicits this sort of response in oyster eaters of all kinds, research has shown that the eating of oysters exposes a definite divide. One group cites the oyster as a luxury to be appreciated in moderation, as a food that helps them refuel: “Eating oysters cleans you out and regenerates you.” They also claim that oysters act as an intellectual stimulant: “They’re full of phosphorus and magnesium. Good for the memory.” By contrast, the second group of consumers prefers quantity over quality. They always choose large oysters because, “if not, there’s nothing to eat.”

The answer to the question of frequency of consumption also produced two opposing profiles. First are the occasional consumers, who prefer to eat their oysters from September to April, and most often during the holiday season. For these people the month with an r adage still holds true. Second are the regular consumers, who eat oysters throughout the year, regardless of the oysters’ milky aspect. These regulars take pride in eating the fatty, milky flesh of oysters over the summer months, whereas the occasional eater will always opt for specimens that are clear and transparent.

Analysis of attitudes of these regular consumers reveals a complex chain of mental associations. It is as if these oyster eaters need to feed their imagination, to draw closer to an authentic and wild image of the sea, which they are apt to describe as “an ocean, cold, in constant movement and perpetually renewing itself.” They speak of “those rocks battered by the waves,” evoking a coast that is totally pure and devoid of tourists. To these people the “real” taste of oysters is that of salt and spray.

When it comes to choosing their oysters, French consumers have much in common with the wine connoisseur. A bottle of any red wine will not do: it must be a bottle of Bordeaux or Chinon or Cahors. The same is true of oysters: a particu-
lar region of production is regarded as a label of quality. In this way the French do not simply eat oysters but rather oysters from Brittany or oysters from Normandy or oysters from La Vendée. Some connoisseurs seek out oysters from even more specific sites: Oléron, Cancale, Noirmoutier, Aven-Belon, even Bouzigues on the Mediterranean. For an oyster to be authentic, it must have a territory and thus an identity.

With the triploid oyster, however, all such notions of identity are wiped out. Born in the decidedly unromantic atmosphere of a laboratory, the oyster has a staunch industrial image. This element of standardization finds its strongest reverberation among regular consumers who bemoan the threat posed to the many varieties of oyster. Their reasoning is similar to those who appreciate vintage wine. For these gastronomes the origin of an oyster is intrinsically linked to its color, texture, and taste. What such connoisseurs fear most is that the advent of the triploid oyster signals the end of the product’s seasonal charm. No more reproduction cycle means that the oyster eater will no longer derive pleasure from detecting a change in taste as the seasons progress toward summer, when the mollusks become milkier.

Where the occasional consumer is concerned, though, it is another story. These oyster eaters, who want to be able to enjoy the foodstuff regardless of the month, are to a certain degree ignorant about the bivalve. On the whole these consumers do not know why oysters become milky at a certain time of the year. When, in the course of the survey, it was explained to them that this new variety is sterile, they suddenly evinced revulsion, thereby joining the ranks of those who feel an aversion to oysters for their association with the taboos of live organisms and sex. Before this revelation they had tended to view oysters as halfway between a vegetable and a mineral: “For me, an oyster is something that grows, that’s still, fixed, almost inert.” The shock of finding out that they had been eating an animal was a big one.

The sterility of the triploid oyster evoked one general remark from all those interviewed. If the sterile oyster continues to be produced, they wondered, is there not a risk that the species will one day die out completely? How will the natural animal continue to reproduce? The comment most often heard was “One day there won’t be any oysters left in the sea.” In the face of such a comment, the triploid oyster becomes a villain: the new kid on the block that threatens to wipe out a mollusk that has evolved, and endured, over millions of years.
To reassure doubters, those who support the triploid development argue that this technology is only a modern version of an ancient farming technique. They cite examples such as the capon, a male chicken castrated when young to improve the quality of its flesh for food. But this argument does not seem to carry much weight where the triploid oyster is concerned. One interviewee summed up the general doubts that consumers fostered: “There’s something not quite right about this comparison with the capon. They’re castrated. They’re born and then they’re castrated. With these oysters, they’re born sterile.”

While the pros and cons of the triploid oyster’s image can be debated, it is clear that a year-round oyster makes good economic sense. In a sector where most consumption is occasional and 60 percent of sales are made at Christmas and New Year’s, the triploid oyster could signal a marketing revolution. A good measure of its future success will certainly rest on the skill with which it is sold to the public. Already the new variety has been christened the “four seasons oyster,” a coinage that points to its year-round availability and preserves a natural image. The connotations from such a name are all positive, but the fact remains that the triploid variety can be perceived as going against the laws of nature. The oyster is such a distinctive food that there will always be people for whom Woody Allen sums up their feeling of utter disgust at the mere thought of eating one. The question now is whether those who find this particular bivalve mollusk a delicacy will come to accept with open arms (and open mouth) a lab-induced alternative.

NOTES
1. OFFER, Le marché français des huîtres et des moules, seven-page report published under the auspices of the Ministry of Agriculture and Fisheries, September 2005.
3. LESMA stands for Laboratoire de Recherche en Stratégie et Marchés des Produits Agro-alimentaires. Audencia was founded more than a century ago and is now one of France’s fastest-growing management schools. More than 1,800 students of all ages and nationalities come to the campus each year, where they are taught by an international faculty of sixty-four professors. A key part of the school’s activity is its research, of which LESMA forms a part.