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## **The Amadori Group: Free-Range Chicken and the Impact of Avian Flu<sup>1</sup>**

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### **Abstract**

Amadori is one of three large commercial producers of chickens in Italy and the only commercial producer of free-range chickens. The threat of the avian flu virus poses a challenge to Amadori because of the possibility that authorities may order all birds to be kept indoors. The crux of the case is to identify and analyze alternatives that Amadori should consider for its line of free-range Il Campese chickens in response to an avian flu virus outbreak.

**Keywords:** avian flu, poultry

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### **IAMA Agribusiness Case 9.4.A**

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## **Introduction**

In June of 2006, Francesco Amadori, the President of Amadori Group, sat in his office and pondered the impact that avian flu may have on his company<sup>2</sup>. The company that he founded with his brothers in the 1950s had been very successful and had exhibited steady growth. However, the threat of avian flu had not only hurt sales, but it also threatened one of their most recent and promising product introductions, the Il Campese brand of free-range chickens, positioned at the absolute pinnacle of the company product portfolio.

The threat of avian flu had a chilling effect on poultry sales throughout Europe, even though there was no danger of virus transmission to humans from eating poultry that was properly raised and cooked. However, the damage to the free-range poultry industry was potentially devastating as one of the key measures used by governments in order to minimize the spread of the virus was to isolate poultry in buildings, thereby minimizing the chance that they would be infected by migratory birds, the most likely carriers of the virus. How could Amadori continue to market Il Campese chickens as free-range if the local health authorities ordered the birds to be raised entirely indoors?

## **Italian Chicken Industry**

The Italian chicken industry is dominated by vertically integrated producers. The great majority of chicken (broiler) production takes place in the “commercial” chain (93%), with the balance occurring in the “rural” chain (7%). The “commercial” chain is best described as producing chicken meat, whereas the “rural” chain produces live birds. The “commercial” chain is characterized by an integrated process including genetics (breeding), incubation, feed production, growing, slaughtering, processing, packaging, and distribution. Growing takes place either in company-owned facilities or is coordinated by contract with independent farmers. Producers in the “rural” chain are typically small farmers who buy most of their inputs and market the birds in local markets.

Italian producers take pride in their achievements. Over the last several decades the industry has shown substantial growth and has achieved international recognition for the high quality of the product. Furthermore, poultry is the only meat product in which Italy has attained self-sufficiency. In 2005, imports (all frozen product) accounted for only about 3% of total consumption, by weight. Approximately 14% of poultry production, by weight, was exported. This figure,

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<sup>2</sup> Much of the information contained in this case was obtained from Amadori’s public website (Amadori). Many of the quotations have been translated from Italian to English. Additional information was obtained from personal communication with one of Amadori’s employees.

high by historical standards, reflects unusual conditions in the latter part of 2005 when producers were forced to sell abroad what could not be sold domestically due to the severe drop in demand following the avian flu scare. Historically, Italian chicken exports represent 5 to 6% of production, by weight.

In 2005, the commercial Italian broiler market produced about 670 thousand metric tons of broilers, with approximately 97% marketed as fresh product. The market is highly concentrated among three major producers. Veronesi produced approximately 300 thousand metric tons, followed by Amadori and Arena, with 200 and 140 thousand metric tons, respectively.

The market for broiler meat is increasingly for meats and further processed products. In 1985, 45% of broilers were sold whole, 52% were sold as parts, and 3% were further processed. By 2005, only 16% of broilers were sold whole, and 65% and 19% were sold as parts and further processed products, respectively.

Per capita consumption of chicken in Italy grew until 2001 (exhibit 1). Since that time, per capita consumption has fallen and it is projected to continue to decline in 2006 because of consumer fear surrounding the avian flu virus. Poultry consumption as a percent of total meat consumption has been relatively stable at 23% over the last 40 years.

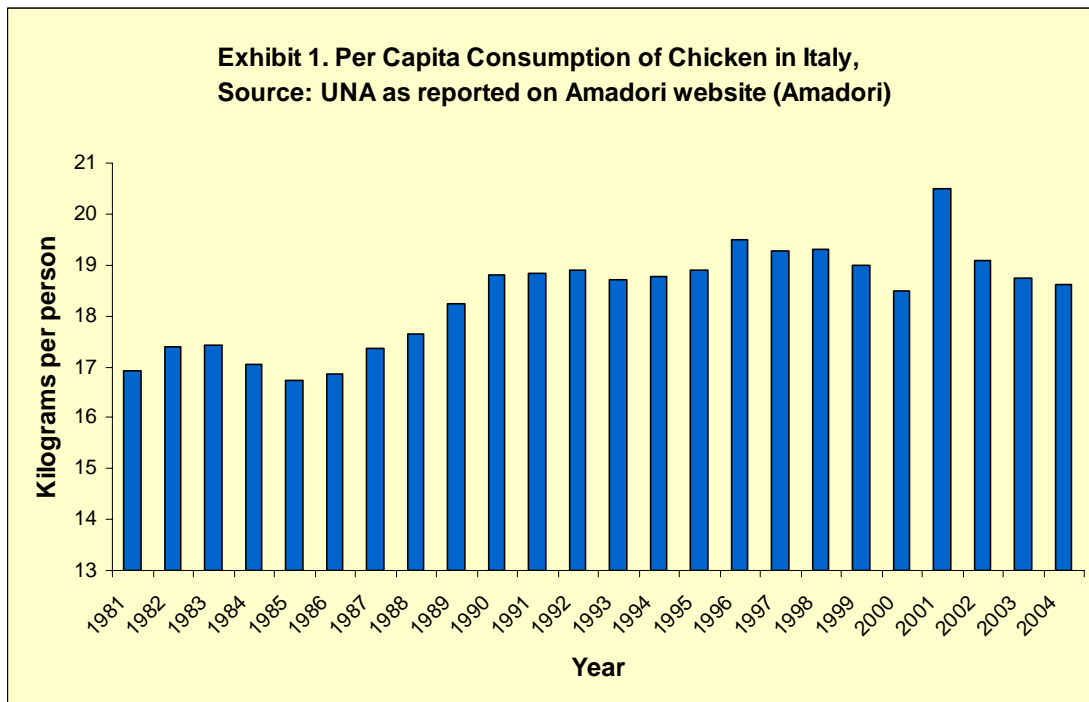


Figure 1: Per Capita Consumption of Chicken in Italy

In 2005, the value of poultry production was €1.45 billion (10% of the value of total livestock production) and egg production was valued at €0.92 billion (7%).

Production is concentrated in Northeastern Italy, with Veneto accounting for 43% of Italian poultry production, followed by Emilia-Romagna and Lombardia with 28% and 10% of production, respectively.

More than 75% of the cost of production of a broiler is due to feed cost (56%) and chick cost (20%). Labor and energy each account for 5%, with amortization at 4%, health costs at 3% and interest at 2%. Other miscellaneous costs account for the remaining 5% of the average 2002-2004 production cost of €2.16 per bird (Corradini and Montanari).

2005 opened as a balanced year ... until August. Then avian flu fear hit, fueled by what many industry observers considered to be media hysteria. The tension built until the discovery of the first positive identification of avian flu in migratory birds in Italy in February 2006. Over this period, domestic consumption dropped from 29.5 million broilers per month to 15.4 million. The industry reacted initially by cutting production by about 1 million broilers/month, increasing exports by 40% to 6 million broilers per month, and freezing excess production. During the September to December period, approximately 31% of total broiler production remained unsold and in storage. When the available refrigerated storage space was filled, all current production had to be sold immediately, causing an average price drop of 30.5%. Careful calculations of industry losses for the 2005 year indicate a total of approximately €358 million. Total losses for the September to December 2005 period reached €158 million, and totaled €378 million for the first quarter of 2006.

The supply chain for commercial broiler production is highly integrated. The large commercial producers control the genetic stock, i.e. the stock of hens and roosters used to produce the chicks that will be raised for broiler production. They operate their own hatcheries and produce their own feed using formulations that are carefully controlled for optimal weight gain. Broilers are raised in carefully controlled environments. Most broilers are raised indoors in enclosed buildings with equipment that automatically provides feed and water to the birds. Many commercial growers use contract growers to raise the birds. Contract growers typically receive the young chicks from the producer and raise them according to detailed specifications. Once the broiler reaches the desired weight, it is transported to the slaughterhouse where it will be slaughtered, packaged, labeled, and prepared for distribution.

The large commercial producers control their primary and secondary distribution networks in order to ensure timely delivery of fresh product to the retail and foodservice accounts. Refrigerated trucks make daily deliveries of product to regional distribution centers, which in turn deliver product directly to retail accounts, foodservice, wholesalers, and supermarket distribution centers.

A relatively small percentage of broilers grown by commercial producers are raised as free-range chickens. Although official statistics are not readily available, industry experts indicate that the market for free-range chickens likely constitutes less than 5% of the domestic market. This premium segment is a recent development for the industry, and is evidence of the continuous search for higher quality products. Amadori is the only commercial producer active in this segment of the market.

## **Major competitors**

Veronesi Finanziaria S.p.A. is the largest producer of poultry in Italy and the third largest producer in Europe. Veronesi participates in several agribusiness segments, primarily related to animal and feed production and processing. In 2004 it had approximately 6400 employees and €1.7 billion in sales. Poultry products are produced by the subsidiary AIA, which was started in 1968. Veronesi's four brands are Palladio, COK, Pavo, and Ovo Mattino. In 2005, AIA produced and processed a total of 300 thousand metric tons of chicken and 200 thousand metric tons of turkey, distributed as fresh, frozen, or processed products. They do not compete in the market for free-range chickens. AIA also produces 1.2 million eggs per year, which are distributed directly to wholesalers and retailers. As the industry leader in the poultry sector, their business strategy is based on quality, distribution, and attention to consumer needs. Veronesi's distribution network utilizes more than 500 refrigerated trucks to transport product from their 27 subsidiaries to their 18 distribution centers in Italy. From these centers, approximately 460 trucks deliver product several times a week to the 25,000 retail outlets and large distribution centers. The Veronesi group also produces approximately 7 million rabbits, 500,000 hogs, and 30,000 head of specially bred beef cattle. Veronesi Mangimi, the first of the Veronesi companies, was founded in 1958 as a producer of animal feed. It currently produces over 2.2 million metric tons of animal feed per year.

The Arena Group is a large diversified Italian food processor. In 2003, it posted sales of over €775 million. The Fresh Food Division, the group's core business, was responsible for 54% of Arena's sales, including poultry and red meat. The other divisions, European Ice Cream Division, Frozen Food and Italian Ice Cream Division, and Cold Cuts, Dairy and Fresh Gastronomy Division, represented 27%, 14%, and 5% of sales, respectively. The Fresh Food Division markets poultry, beef, pork, and lamb products under five brands, Arena, Ruspantino, Grandi Orizzonti, Garbini, and NatuRicchi. They produce both fresh and pre-cooked products. Poultry products are advertised as being of high quality, produced using only plant products, and GMO free. Arena does not produce or sell free-range chickens.

The Italian chicken market is almost entirely supplied by Italian producers. At one time, approximately 40% of the chicken sold in Italy was imported. For years, non-EU producers took advantage of a lower import duty on salted products and

captured a significant share of the market because of their lower cost of production. However, the EU has since closed this loophole by raising the duty.

The three major commercial competitors pursue similar strategies in the chicken industry. They all invest heavily in their brands and emphasize the high quality and traceability of their products. Two factors have driven this push for quality. First, Italian consumers tend to be very discriminating in their food purchases. Second, recent concerns over food safety – the most recent one over avian flu – have led Italian producers, pushed by their industry trade association, to focus heavily on quality, safety, and traceability.

As an example, Amadori exceeds the EU requirements for traceability, and does so in a user-friendly manner. They provide online information for their fresh products, whereas the information for processed products (where the broiler meat is an ingredient) may be requested online and sent via e-mail. For processed products, the current requirement is that the country of production must be provided, whereas Amadori provides traceability back to the actual location where the broiler was raised.

The impact of the EU closing the trade loophole and consumer concern for avian flu has been a stagnant market dominated by branded chicken products produced principally by domestic producers. Unbranded, commodity-like broilers may still be found, although these birds, which are mostly sold whole, represent a very small proportion of production. Despite the emphasis on quality by all of the major competitors, no producer has been able to substantially differentiate itself from its competitors and charge a significant premium for its products. Rather than being a differentiating feature, a high quality product is expected of any market participant.

## **The Amadori Company**

The Amadori company has its origins in the 1930s when Ondina and Agostino Amadori began to raise poultry on a commercial basis with their sons Francesco, Arnaldo, and Adelmo. In the mid-1950s, Francesco and Arnaldo started their own chicken farms. The success of these farms led them to grow, increasing the number of farms, and production. In the 1960s, the Amadoris opened a feed mill, hatchery, and slaughterhouse. The 1970s were a period of growth for the company. They began to raise free-range chickens, established a nationwide distribution system, and opened a second slaughterhouse. In the 1980s the company continued to grow, adding value-added poultry products to its product line and initiating advertising campaigns. By the 1990s the Amadori Group had expanded its line of products to include pork, sausages, breaded products, and other protein products. Sales of value-added products fueled much of its growth.

The Amadori Group is the second largest poultry producer in Italy. In 2004, it had sales of €645 million. Amadori employs approximately 5,500 people. It has 20 plants including 5 feed mills, 6 hatcheries, 6 slaughterhouses, and 3 production plants and over 30 subsidiaries. Exhibits 2 and 3 provide information on Amadori poultry production and sales.

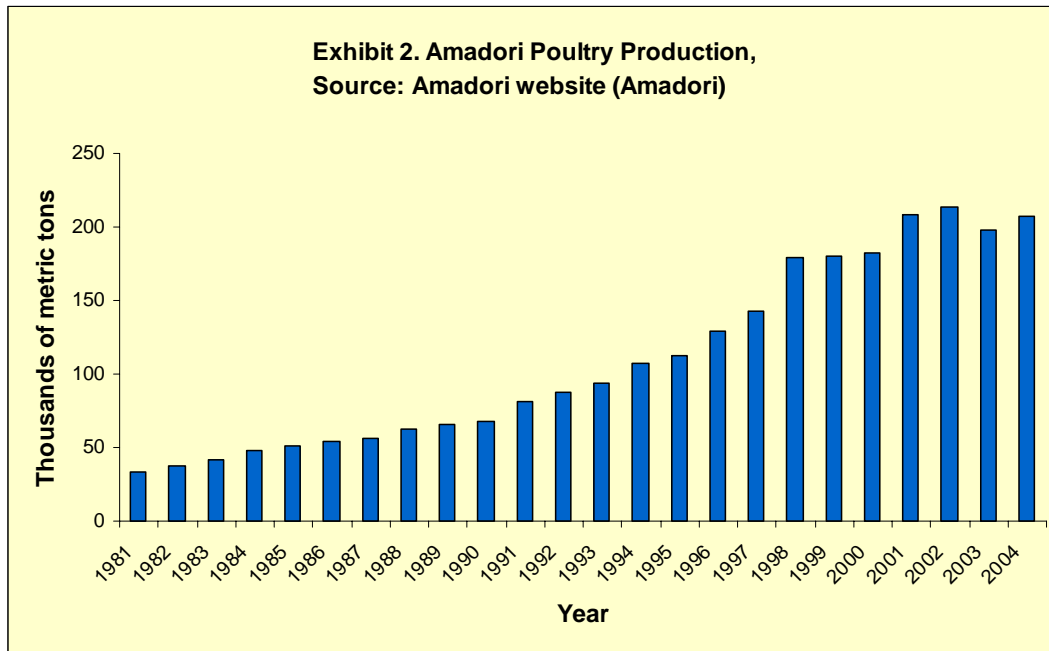


Figure 2: Amadori Poultry Production

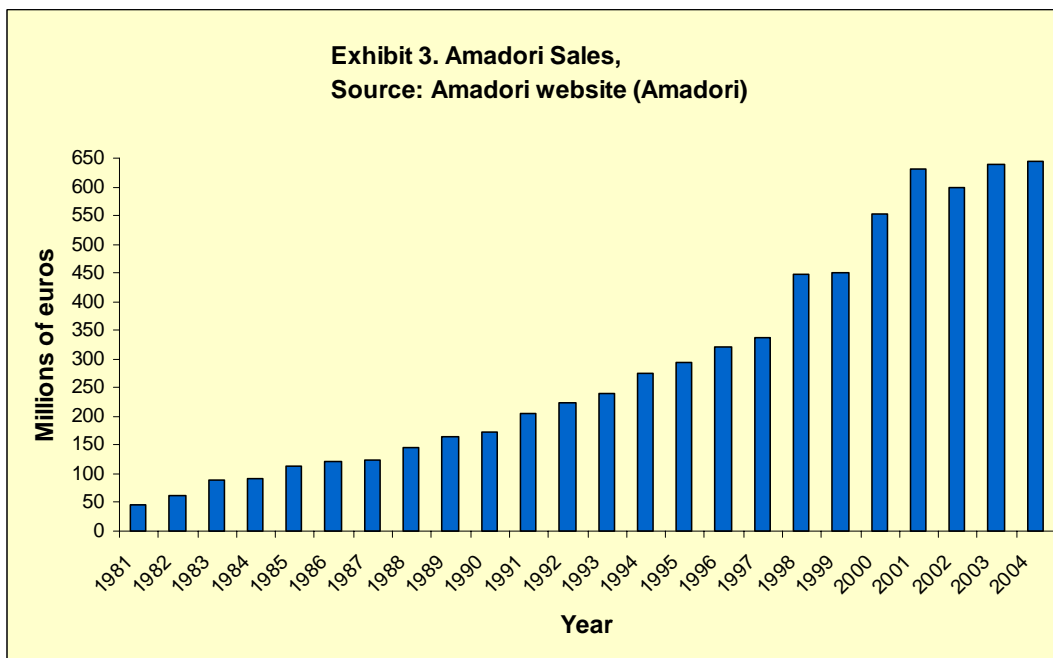


Figure 3: Amadori Sales



Amadori considers its products to be “well rooted in tradition and innovation.” Their positioning in the market is built on the high quality profile of their broiler products and their recent expansion in other “white” meats. Indeed, they pride themselves on being the “Italian innovative company” and a “reference point for meat-based dishes.” They state that they have a large team and that “with passion and experience we develop innovative meat-based delicatessen solutions. Our work is to secure food safety, transparency and trust” (Pippi, translated).

Their ambitious positioning objective is to emphasize Amadori’s roots in the socio-economic and cultural reality of their land, as well as its family traditions. These values are stressed in all advertising by the company, always featuring Francesco Amadori. This loyalty to the Italian culinary tradition is completed by an awareness of modern needs and lifestyles, and of modern nutritional and dietary requirements. The resulting products offer freshness and quality, are versatile and easy to prepare, while remaining true to traditional flavors and Italian tradition. Amadori’s product portfolio is rich, ranging from fresh poultry meats to processed poultry and pork products that are table-ready in 10 minutes.

In 2001, Amadori launched a line of products called 10+. The purpose of this line was to assure consumers that 10+ poultry products were “completely safe and wholesome, in line with Amadori’s ethical standards.” The introduction of the line followed the BSE (mad cow) crisis, which devastated the European market for commercially-raised beef. Chickens raised under the 10+ label are raised using sophisticated production standards. They are fed a diet free of animal meals and fats, growth-promoting hormones, antibiotics, and GMOs. They are raised entirely in Italy, and meet other stringent specifications. Amadori also guarantees advanced, detailed traceability of 10+ products, exceeding the minimum requirements of recently passed legislation. Traceability results are available online for all 10+ products, and are provided by e-mail for all further processed products. This is done to “provide transparency to the system of food production and reestablish a bond of trust between producers and consumers” (Amadori).

The introduction of the 10+ line was followed in 2002 by the introduction of the “Il Campese” brand of free-range chickens. Il Campese chickens are advertised as being raised “in the open air.” While the birds are provided shelter, they have open access to the outdoors. The density of the Il Campese broilers is approximately 12 chickens per square meter indoors and 1 chicken per square meter outdoors. This compares to a density of 16 to 18 broilers per square meter for conventionally raised broilers, which are raised exclusively indoors. Il Campese chickens are selected from special breeds with reddish feathers and Amadori indicates that the meat is “characterized by longer and thinner legs and a thinner and more pointed breast.” The Il Campese brand was an instant success. Amadori currently produces approximately 80,000 Il Campese broilers per week out of a total production of 1.5 million broilers.

Amadori reports that in blind taste tests that it carried out with over 800 consumers the meat of its Il Campese chickens was preferred over traditional broiler meat by almost 75% of the respondents. Participants in the taste tests noted that the meat was firmer and more muscular and that it had a different flavor. More than 95% of the taste test participants indicated that they would purchase the product.

The production system used by Amadori is similar to the vertically integrated production system of other commercial growers. The company controls the entire process of chicken production from breeding to distribution. Approximately one-third of the chickens are raised by contract growers, with the balance being raised on Amadori's farms. Amadori also produces feed for its poultry in company-owned feed mills.

Preserving freshness is a hallmark of Amadori's distribution system. Direct delivery of chicken products using company-owned trucks is made to large accounts within 12 to 24 hours of slaughtering. Distribution through company-owned distribution centers is also normally completed within 24 hours.

The Amadori line of products is highly promoted. All of the products are branded with the Amadori *Passione di Famiglia* (Family Passion) label. Amadori advertising focuses on the family-based traditions of the firm. Recent advertising campaigns have focused on the high quality of the products and the introduction of the 10+ product line. The commercials end with the familiar "Francesco Amadori's word."

## **Avian Flu Events**

The H5N1 avian influenza virus is a highly pathogenic virus that has become commonly known as avian (or bird) flu. Table 1 contains some of the key events reported in the form of a timeline.

**Table 1: Timeline of H5N1 avian influenza (WHO)**

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<b>1996</b>	H5N1 virus isolated from a farmed goose in Guangdong Province, China.
<b>1997</b>	H5N1 outbreaks in poultry reported in Hong Kong.
<b>1997</b>	18 human infections of H5N1 are reported in Hong Kong (6 fatal). This is the first known occurrence of human infection.
<b>February 2003</b>	Two human cases (one fatal) reported in Hong Kong. The family had recently traveled to Fujian Province, China.
<b>2003-2004</b>	Cases of H5N1 in poultry are reported in Korea, Vietnam, Japan, Thailand, Cambodia, Laos, Indonesia, China, and Malaysia.
<b>August 2004</b>	Vietnam reports 3 cases of human H5N1 infection (all fatal).

<b>September 2004</b>	Thailand confirms a fatal case of human H5N1 infection.
<b>December 2004</b>	Outbreaks of H5N1 in poultry are ongoing in Indonesia, Thailand, and Vietnam, and possibly in Cambodia and Laos.
<b>July 2005</b>	Russia reports an outbreak of H5N1 in poultry.
<b>August 2005</b>	Kazakhstan reports an outbreak of H5N1 in poultry. Mongolia reports an outbreak of H5N1 in migratory birds.
<b>October 2005</b>	Turkey and Romania confirm H5N1 in poultry. Croatia confirms H5N1 in wild birds.
<b>December 2005</b>	Ukraine reports first H5N1 in domestic birds.
<b>February and March 2006</b>	Iraq, Nigeria, Egypt, India, Malaysia, Niger, Albania, Myanmar, Afghanistan, Israel, Pakistan, and Jordan report H5N1 in poultry. Azerbaijan, Bulgaria, Greece, Italy, Slovenia, Iran, Austria, Germany, France, Hungary, Slovakia, Bosnia-Herzegovina, Georgia, Switzerland, Serbia-Montenegro, Poland, Denmark, Sweden, and Czech Republic report H5N1 in wild birds.
<b>February 25, 2006</b>	France confirms first H5N1 in farmed turkeys. This marks the first case of H5N1 in domestic poultry in the EU.

The EU has enacted regulations designed to stop the spread of avian flu from wild birds to domestic birds and among domestic birds (European Union). These regulations include the mandatory culling and destruction of any poultry confirmed to be infected with the H5N1 avian flu virus. Furthermore, all eggs and poultry products from infected birds must be destroyed. The meat from any birds that were slaughtered during the incubation period of the virus must be traced and destroyed.

The current EU regulations make little distinction between actions to be taken in the protection zones and surveillance zones. In the case of a suspected or confirmed case of highly pathogenic H5N1 avian flu in wild birds, EU members must establish a protection zone of 3 kilometers and a surveillance zone of 10 kilometers around the area. In both zones, all poultry and captive birds must be kept indoors, on-farm biosecurity measures must be applied, the movement of poultry and other captive birds within and from the zones must be restricted and wild bird hunting and assembly of birds is prohibited. In the case of a suspected or confirmed outbreak of highly pathogenic H5N1 avian flu in domestic poultry the EU mandates that a 3 kilometer protection zone and a 10 kilometer surveillance zone be established. In addition to the culling of the infected birds, birds on neighboring holdings suspected of infection must be culled. All poultry is to be confined indoors in both zones.

EU member states are free to adopt more stringent measures in the event of an outbreak. Currently, vaccination against the disease is not recommended.

Vaccination may keep birds from getting sick and dying. However, it is possible for vaccinated birds to be infectious and thereby spread the disease.

The February 2006 discovery of the H5N1 virus on a farm with 11,000 turkeys in Eastern France sent shock waves through France's poultry industry. Sales of poultry in France declined by 30 to 50 percent following the discovery. France immediately took aggressive measures in response to the arrival of the virus.

Likewise, the discovery of a case of the H5N1 virus in migratory birds in Italy triggered the recent drop in consumption and prices of poultry in Italy.

### **Impact of Avian Flu on Free-Range and Organic Chicken**

The discovery of avian flu in domestic poultry and the resulting actions of the French government (including a requirement that all poultry must be raised exclusively inside) were particularly problematic for Bresse poultry producers. Producers in this region sell poultry under the coveted Bresse Appellation d'Origine Controlée (zone of origin). Sold at very high prices, Bresse poultry must meet strict criteria in order to be sold under the Bresse appellation. These rules include genetic purity, a strictly defined geographic area in which the chickens must be raised, and precise rules for breeding and presentation. These criteria also mandate that the chickens be raised in free-range conditions for nine weeks.

After the discovery of avian flu in the Bresse area, the Bresse poultry producers appealed to the French government for permission to vaccinate their chickens in order to keep them outdoors. This request was denied. However, the Bresse producers were allowed to keep their birds indoors without losing the "Bresse" denomination.

Following an EU decision, the Italian government recently made a similar ruling for organic poultry, which, by law, is required to be raised outside. Italian officials have ruled that in the event that health authorities order poultry inside, the Italian government will allow organic poultry in the affected areas to continue to be marketed as organic for the duration of the health threat.

### **Situation and Problem**

Mr. Amadori was concerned about the fate of the highly successful Il Campese brand. What would happen to the brand if they were forced to bring the chickens inside? This could happen at any time at the discretion of the local or national health authorities. Such an action may be simply precautionary or in response to a reported or confirmed case of avian flu in domestic or wild birds. Furthermore, because the Il Campese chickens are raised in several locations, an order to raise poultry indoors may affect only a part of the Il Campese production.

He ruled out vaccinating the chickens as a way to keep the chickens outside. It was simply too expensive to vaccinate a broiler raised to maturity in two months. Another option that he considered was to seek an exemption from the Italian government that would allow him to maintain the existing label indicating that the chickens were free-range, even though the chickens may be raised exclusively indoors during all or part of their lives. Would consumers understand the rationale behind this decision or would they find it deceptive? A third option was to change the label and/or the brand. Of course, they could always stop production (temporarily or permanently) of the Il Campese chickens in response to an avian flu crisis.

Tests performed by Amadori indicate that Il Campese chickens raised inside would still be substantially different than those raised conventionally – they are a different breed, are raised with more space, and given different feed. The meat still retains a distinctive flavor, although the difference between the taste of Il Campese chickens and conventionally-raised chickens diminishes somewhat when the chickens are raised exclusively indoors.

Mr. Amadori pondered what actions his firm might take, both for the short-run and to preserve the long-term integrity of the brand, in response to an order by health authorities to keep chickens inside.

## **Questions**

Based on the information in the case, prepare a plan for Amadori for their Il Campese brand of free-range chickens in the event that all chickens are ordered to be raised exclusively indoors for an indefinite period in response to the threat of avian flu.

1. Identify two or three alternatives that you believe Amadori should consider.
2. Provide an analysis for each of your alternatives, identifying the major implications.
3. Recommend a plan for Amadori and support your recommendation.

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