※注意：請於試卷上「選擇題作答區」內依序作答。

單選題（每題2分，答錯倒扣0.6分）

(Article 1) CLA: The Trans Fat You Can Love

It's tempting to interpret the mere presence of a trans double bond as grounds for a fat's banishment from the diet. But a trans fatty acid called conjugated linoleic acid, or CLA, proves that some trans fats aren't so bad. In fact, CLA may actually do us some good.

An 18-carbon fatty acid with two double bonds, CLA is the product of a naturally occurring microbial hydrogenation of linoleic acid that takes place in ruminant animals' stomachs. This changes "factory-model" linoleic acid into several CLA isomers by switching one of its cis double bonds to trans, and shifting that bond's position on the fatty acid chain.

The two most common CLA isomers are the cis-9, trans-11 and trans-10, cis-12 forms, and unlike trans fatty acids produced through industrial hydrogenation, they come bearing benefits. The former, also known as rumenic acid, appears to reduce the risk of such cancers as prostate, colorectal, stomach, lung and skin by slowing precancerous-cell growth; it may also reduce breast-cancer rates by affecting a gene that up-regulates programmed cell death, thus shrinking tumors. Studies hint at the ability of the trans-10, cis-12 isomer to help burn fat, enhance muscle tone, increase nutrient absorption, and improve the body's efficiency at extracting energy from food.

Given these potential benefits, it makes sense that FDA excludes CLA from the censure of its trans-fat labeling rule. But the reasons have less to do with CLA's healthful properties than with FDA's definition of a trans fat, which, for labeling purposes, is any unsaturated fatty acid with one or more isolated double bonds. CLA's two double bonds are conjugated—separated by a single bond—and not isolated. Talk about your lucky breaks.

Milk and muscle of ruminants have traditionally been our main CLA sources. But many people are consuming less meat and dairy fat, and missing out on some of the aforementioned health gains. Then again, so may the ruminants themselves, as modern livestock feeding emphasizes grains over grass, reducing their linoleic acid intake and giving rumen microbes less raw material to work with. While CLA has yet to merit an established benchmark for daily intake, supplement manufacturers suggest its inclusion in formulas at around 1.5 grams per serving. (Kimberly J. Decker, 2006, Food Product Design; http://www.foodproductdesign.com/)

1. What is CLA? (A) a saturated fatty acid, (B) an unsaturated fatty acid, (C) an acid in human's stomach, (D) an abundant fatty acid in grass.
2. How many double bonds in a rumenic acid molecule? (A) 18, (B) 10, (C) 9, (D) 2.
3. What is good source of CLA in nature? (A) pork, (B) fish muscle, (C) dairy fat, (D) grains.
4. Why does FDA exclude CLA from the censure of its trans-fat labeling rule? (A) Its double bonds are adjacent, (B) It has trans double bond, (C) It has cis double bond, (D) It is from hydrogenation.
5. According this passage, what is NOT potential benefit of CLA? (A) reduce the risk of skin cancer, (B) enhance muscle tone, (C) increase nutrient absorption, (D) shrink prostate.

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(Article 2) Better sleep through Carbs?

Those who have trouble falling asleep at night might consider reaching for a bowl of jasmine rice instead of a sleeping pill, based on results of a recent Australian study ("High-glycemic-index carbohydrate meals shorten sleep onset," Afaghi A, O'Connor H, and Chow CM, The American Journal of Clinical Nutrition, Feb. 2007; 85:426- 430).

Because carbohydrate intake increases the plasma concentration of tryptophan, a precursor of serotonin and a sleep-inducing compound, University of Sydney researchers decided to explore the effect of glycemic index (GI) and the timing of meals on sleep. The scientists tested 12 healthy men, aged 18 to 35 years, with no sleep problems. After fasting for five hours they ate a meal of rice with steamed vegetables in tomato puree, with one of two types of rice and different mealtimes. All the participants tested each of three variables: One test meal was made with high-GI (109) jasmine rice and eaten either one hour or four hours before bedtime. Another meal included lower-GI (50) long-grain rice and was also eaten four hours before bedtime.

The two types of rice contain similar levels of carbohydrates, 35% to 36%, but differ in starch composition. Although jasmine rice is a long-grain variety, it contains more amylopectin, a highly branched starch molecule. Regular long-grain rice has more amylose. When amylose is digested, less glucose is freed at once than from the highly branched amylopectin chains, so high-amylose rice has a lower glucose response than high-amylopectin varieties ("Mechanisms of the Effects of Grains on Insulin and Glucose Responses," Hallfrisch J, Behall KM, Journal of the American College of Nutrition, June 2000, 19:320S-325S).

Those consuming a high-GI meal 4 hours before bedtime fell asleep more quickly (9.0 ± 6.2 minutes) than those eating a low-GI meal (17.5 ± 6.2 minutes). Eating the high-GI meal 4 hours before bedtime also put them to sleep faster than eating the same meal 1 hour before bedtime (14.6 ± 9.9 minutes). The researchers observed no effects on other sleep variables. (Lynn A. Kuntz, 2007, Food Product Design; http://www.foodproductdesign.com/)

6. According to this passage, what can help people fall asleep? (A) a sleeping pill, (B) a high-GI meal, (C) a bowl of long-grain rice, (D) jasmine flowers.
7. Which statement about the subjects of the sleeping experiment is NOT true? (A) They are all male. (B) They do not have sleeping problem. (C) They are all in their twenties. (D) They ate rice with vegetable as the experiment was conducted.
8. Which statement is NOT true about tryptophan? (A) a type of jasmine, (B) an amino acid, (C) a precursor of serotonin, (D) a sleep-inducing compound.
9. According this passage, when is best time to consume jasmine rice to get a good sleep? (A) one hour, (B) four hours, (C) 9.0 minutes, (D) 14.6 minutes before bedtime.
10. What is true about high-GI meal comparing to the low one? It contains (A) more carbohydrates, (B) more tomato puree, (C) more amylase, (D) more amylopectin.

(Article 3) Color Quality of Rose Liqueur

The effect of pretreatments and soaking conditions on the color quality of rose liqueur was investigated. Results show that: a) most of the anthocyanin in rose petals was dissolved within 48 hours of soaking; b) a

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longer soaking time led to a lower color quality due to browning; c) a base spirit at lower ethanol content extracted more anthocyanin but also resulted in more browning; d) 50°C air drying to 20 % water content retained 90 % of anthocyanin in rose petals; and e) the soaking of dried petals in the base spirit yielded a product with less browning as compared with that of fresh petals. The process for the making of rose liqueur with the best color quality was found to be soaking dried rose petals at 1:10 ratio (rose petal: ethanol, w/w) in a base spirit containing 30-35 % ethanol added with 0.6-0.8 % citric acid for 24 hrs, then diluting the extract to 16 % ethanol content. (Shen, Tseng, Chao and Wu, Journal of Food Quality, in press.)

11. Which word has the meaning closest to "abstract"? (A) outline, (B) highlight, (C) summary, (D) conclusion.
12. "Spirit" in the above context is a synonym of (A) liquor, (B) alcohol, (C) wine, (D) drink.
13. Which among the following words is comparatively improper to be a keyword for the above abstract? (A) rose, (B) anthocyanin, (C) color, (D) water.
14. Anthocyanin is not (A) a color compound, (B) a nutrient, (C) a pigment, (D) an indicator of color quality.
15. The content of citric acid in the rose liqueur made from the recommended process is about (A) 0.1-0.2 %, (B) 0.3-0.4 %, (C) 0.5-0.6%, (D) 0.6-0.8 %.

(Article 4) Processing of a Mixed Rose Tea

Roses of the deep-red Rosa Grand Gala and the fragrant Rose Double Delight cultivars were used for experiments in the development of a mixed rose tea. Results recommend to partially dehydrate Grand Gala petals to 25% moisture content in 1.2 m/s 80℃ hot-air flow, to store the partially dehydrated Grand Gala petals with fresh Double Delight petals (1:3.4 w/w) at 36℃ for 8 hrs for scenting, to vacuum-dry the Grand Gala petals at 30℃ for 10 hrs and to hot-air dry the Double Delight petals at 80℃ for 4 hrs after the scenting operation, and then to mix the dried Grand Gala and Double Delight petals at 5:1 w/w ratio to obtain a mixed rose tea that makes a tea infusion with good color, aroma and taste. Evidences show that the scenting and mixing operations improve the overall sensory acceptance of the infusion effectively. More than 85% of the major components were retained in the rose tea after storage in a closed shaded container for 11 months. (CIGR Section VI - 3rd International Symposium, accepted.)

16. "Cultivar" in plant taxonomy is on the same level as (A) species, (B) genus, (C) variety, (D) group.
17. What is the quality attribute to be improved by "scenting" operation? (A) color, (B) aroma, (C) taste, (D) body.
18. What is the "tea infusion" as mentioned in the abstract? (A) the rose tea drink, (B) the mixture of dried rose petals, (C) the mixture of tea leaves and dried rose petals, (D) none of the above.
19. Which is a closed shaded container? (A) a colorless glass bottle, (B) a common light-colored PET bottle, (C) a common transparent plastic bag, (D) a tin can.
20. "Mixing" as a food processing operation has the similar meaning as (A) finishing, (B) blending, (C) adjusting, (D) formulating.

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(Article 5)

The free amino acid asparagine and the reducing sugars glucose and fructose have been reported to serve as precursors for the heat-induced information of potentially toxic acrylamide in a variety of plant-based food. To contribute to our knowledge about the levels of these precursors, we used ion-exchange chromatography to measure free asparagine and high-performance liquid chromatography (HPLC) to measure free glucose, fructose, and sucrose in 9 potato varieties sold at retail in Italy and in 22 varieties sold in the United States. Asparagine levels (in mmol/kg of fresh wt) ranged from 1.17 for the Agata potatoes to 57.65 Russet potatoes, a 49.3-fold variation from lowest to highest value. The corresponding levels for fructose ranged from 1.73 (Fingerling Ozette) to 33.63 (Red), 19.4-fold variation from the lowest to highest value. For glucose, the concentration ranged from 1.11 (Jelli) to 34.73 (Yukon Gold B) potatoes, a 31.3-fold variation from lowest to highest value. The corresponding values for sucrose ranged from 1.16 (Fingerling Ozette) to 40.61 (Marabel) potatoes, a 35-fold variation. The American potato varieties Kennebec, White, and Flingerling Ozette and Italian potato varieties Agria, Merit, and Marabel had very low levels of both asparagine and reducing sugars. The results may enable consumers, restaurants, and processors to select commercial potatoes with low levels of acrylamide precursors for baking or frying. (Vivanti et al., 2006, J. Food Sci., 71(2): C81-C85)

21. According to the article stated above, which of the following varieties gives the highest content of sucrose? (A) Yukon Gold B, (B) Marabel, (C) Jelli, (D) Fingerling Ozette.
22. According to the article stated above, which of the following ones is harmful? (A) glucose, (B) sucrose, (C) fructose, (D) acrylamide.
23. According to the article stated above, how many varieties of American and Italian potatoes have low levels of both asparagine and reducing sugars? (A) six, (B) five, (C) four, (D) three.
24. In terms of health, which of the following varieties is the best choice for baking or frying according to the article stated above? (A) Red, (B) Russet, (C) Fingerling Ozette, (D) Marabel.
25. According to the article stated above, which of the following statements is correct? (A) For sucrose, the concentration ranged from 1.11 (Jelli) to 34.73 (Yukon Gold B) potatoes, a 31.3-fold variation from lowest to highest value, (B) The corresponding values for glucose ranged from 1.16 (Fingerling Ozette) to 40.61 (Marabel) potatoes, a 35-fold variation, (C) Asparagine levels (in mmol/kg of fresh wt) ranged from 1.17 for the Agata potatoes to 57.65 Russet potatoes, a 19.3-fold variation from lowest to highest value, (D) The corresponding levels for fructose ranged from 1.73 (Fingerling Ozette) to 33.63 (Red), 19.4-fold variation from the lowest to highest value.
26. According to the article stated above, which of the following ones was used to measure free asparagine? (A) high-performance liquid chromatography, (B) ion-exchange chromatography, (C) thin-layer liquid chromatography, (D) gas chromatography.

(Article 6)

In the human diet, coffee is the major source of caffeoyl-quinic acids known as powerful antioxidant. The

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aim of this study was to assess the effect of usual coffee consumption, such as the addition of milk, and of processing conditions, such as spray-drying, on beverage antioxidant power and potential polyphenol bioavailability impairments. When 25% milk was added to coffee, up to 40% of coffee chlorogenic acid was found to be bound to dairy proteins, using an ultrafiltration technique. However, neither milk addition nor spray-drying had a significant effect on beverage antioxidant power, evaluated using 2,2-diphenyl-1-pycrylhydrazyl (DPPH), 2-2'-azobis (2-amidinopropane) dihydrochloride (AAPH), and total antioxidant capacity (TAC) tests. Moreover, these interactions tended to decrease during in vitro gastric and intestinal digestion, thus suggesting that interactions between chlorogenic acid and milk proteins in coffee and milk beverage may not have any significant effect on coffee antioxidant power before and after consumption. (Dupas et al., 2006, J. Food Sci., 71(3): S253-S258)

27. According to the article stated above, which of the following ones is not the purposes of this study? (A) to assess the effect of usual coffee consumption on the beverage antioxidant power of coffee, (B) to assess the effect of processing conditions on the potential polyphenol bioavailability impairments of coffee, (C) to assess the effect of addition of milk on the potential polyphenol bioavailability impairments of coffee, (D) to assess the effect of addition of sugar on the beverage antioxidant power of coffee.
28. According to the article stated above, which of the following ones was not used for the evaluation of coffee antioxidant power? (A) 2,2-diphenyl-1-pycrylhydrazyl test, (B) ultrafiltration technique test, (C) 2-2'-azobis (2-amidinopropane) dihydrochloride test, (D) total antioxidant capacity test.
29. According to the article stated above, when 25% milk was added to coffee, up to 40% of what was found to be bound to dairy proteins? (A) coffee chlorogenic acid, (B) coffee dihydrochloride, (C) coffee pycrylhydrazyl acid, (D) coffee chloric acid.
30. According to the article stated above, which of the following statements is not correct? (A) The interactions between chlorogenic acid and milk proteins tended to decrease during in vitro gastric and intestinal digestion, (B) Milk addition and spray-drying had not a significant effect on beverage antioxidant power, (C) In the human diet, coffee is the major source of caffeoyl-quinic acids known as powerful oxidant, (D) Using an ultrafiltration technique to evaluate the interactions between chlorogenic acid and milk proteins.

(Article 7) Mutagenicity and antimutagenicity of the methanol extracts of unfermented and fermented black bean against 4-nitroquinoline-*N*-oxide and Benzo[a]pyrene

There is a close correlation between mutagenesis and carcinogenesis. Avoiding exposure to mutagens and eating an adequate supply of nutritious foods containing antimutagens has been considered a viable strategy to reduce the rate of mutation and thus reduce incidence of cancer in humans.

Black beans contain isoflavone, vitamine E, soaponin and anthocyanin which have shown to exert biological activity. In China, black beans fermented by filamentous fungi were further processed to make traditional fermented condiments such as *In-yu* black sauce and *In-si* or *Ttou-si*, the dried by-product of the mash of black bean sauce.

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Black soybeans have been reported to exert antimutagenic activity against aflatoxin B_1 and to effectively reduce the incidence of DNA damage by cyclophosphamide. In addition, combining the *Rhizopus azygosporus*-fermented black bean with rice has also been suggested as a way to develop a nutritious weaning food.

In our laboratory. we previously noted that black bean possessed antioxidative activity, including α-α-diphenyl-2-picyl-hydoxyl radical-scavenging effect, Fe^{2+}-chelating ability, and reducing activity, which was enhanced by fermentation with fungi. Additionally, fermentation was also noted to increase the content of aglycone, the bioactive isoflavone.

Most recently, solid fermentation of steamed black bean with various GRAS filamentious-fungi including *Aspergillus awamori*, *Aspergillus oryzae* BCRC 30222, *Aspergillus sojae* BCRC 30103, *Rhizopus azygosporus* BCRC 31158 and *Rhizopus* sp. No.2 was performed in our laboratory. Mutagenicity and antimutagenicity of the methanol extract of unfermented and fermented steamed black beans against 4-nitroquinoline-*N*-oxide (4-NQO) and Benzo[a]pyrene (B[a]P) on *Salmonella* Thphimurium TA100 and TA 98, were examined.

Within the dose levels examined, the methanol extracts of unfermented and fermented steamed black beans show no mutagenic activity on both test organisms. On the other hand, they exhibited suppression effects on the mutagenesis induced by either 4-NQO or B[a]P on *Sal.* Typhimurium TA100 and TA98. Fermentation with fungi was also found to enhance the antimutagenic effect of black bean while the antimutagenic effect of the fermented black beans extract varied with the starter organism, mutagen, and test strain of *Sal.* Typhimurium examined. Generally, the exract of *Asp. awamori*-fermented black bean exhibited the highest antimutagenic effect. With *Sal.* Typhimurium TA100 as test organism and at a dosage level of 5.0 mg/plate, extract of *Asp. awamori*-fermented black bean showed an inhibition rate of 92 and 89%, respectively, on the mutagenicity of 4-NQO and B[a]P compared to 41 and 63%, respectively, noted with unfermented black bean extract. In comparison, an inhibition rate of 94 and 81%, respectively, was found with the extract of *Asp. awamori*-fermented black bean when *Sal.* Typhimurium TA98 was used as the test organism. Meanwhile, the fermented black bean extract showed a lower inhibition rate of only 58 and 44%, respectively. (Adopted and modified from a manuscript prepared by Huang et al.)

31. Black bean koji was prepared by growing (A) molds, (B) yeasts, (C) bacteria, (D) viruses in steamed black bean.
32. The extract of *Aspergillus awamori*-fermented black koji at at a dose of 5.0 mg/plate exhibited a suppression rate of (A) 58%, (B) 92%, (C) 89%, (D) 94% on the mutagenicity of 4-NQO in *Sal.* Typhimurium TA 98.
33. Aglycone was related to (A) isoflavone, (B) anthrcyanin, (C) vitamine E, (D) saponin.
34. Which one of the following statements is not correct for black bean (A) suppressing the mutagenesis of aflatoxin B_1, (B) causing the mutagenesis in *Sal. Typhimurium*, (C) reducing DNA damage by chclophosphamide, (D) containing anthocyanin.
35. Microorganisms mentioned in this article while not being used as a strter: (A) *Aspergillus oryzae*, (B) *Aspergillus awamori*, (C) *Rhizopus azygosporus*, (D) *Salmonella* Typhimurium.
36. Which one of following statements concerning "In-si" is not correct: (A) a fermented product, (B) prepared with fungi, (C) a substance applied to food to improve flavor, (D) using soybean as the raw material.

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37. It is suggested to use the *Rhizopus azygospours*-fermened black bean as one of the ingredients for the formulation of food used by (A) adult, (B) meddle age people, (C) patient, (D) child who start to eat baby food other than breast milk.
38. The incorrect statement concerning the effect of fermentation on black bean is (A) Fermentation resulted in an increase in reducing activity, (B) Fermentation resulted in an reduced antimutagenic effect against B[a]P, (C) Fermentation reduced the mutagenicity of 4-NQO, (D) Fermentation resulted in an enhanced Fe^{2+}-chelating ability.
39. The statement which does not coincide with the description in this article is (A) Eating food containing antimutagen may reduce the incidence of cancer. (B) Mutagenesis is related to carcinogenesis. (C) The more the contact with mutagen, the higher the possibility of cancer incidence (D) Extract of unfermented black bean reduced the mutation rate more pronouncedly than did extract of fermented black bean.
40. Which one of the following chemicals is not a mutagen: (A) aflatoxin B_1, (B) soaponin, (C) 4-NQO, (D) B[a]P.

(Article 8) Food safety control and dietary habits

Food safety control and dietary habits

Both the safety and quality of food products have been of increasing interest for consumers worldwide, with a growing emphasis on health risks from food in the public debate. Moreover, due to globalisation and the availability of new technological processes, the food sector has grown increasingly complex. It should not be forgotten, however, that problems with food quality and safety have existed since food became a trade in ancient times.

Although caution is warranted, and criminal tampering with food must be detected and prevented, I will argue that European food is fundamentally sound, because appropriate safeguards exist to protect us. At the same time, however, a number of issues remain which, if addressed, could significantly improve the current situation. Although this is primarily a European perspective, the possible solutions I discuss can be extrapolated to the wider world.

Consumers are increasingly exposed to overpowering and conflicting sources of information about food. This information is not restricted to concerns about safety aspects of food products, but also encompasses a wide variety of dietary recommendations. Research on nutrition and cardiovascular disease, obesity, nutrition and cancer, to name a few, has demonstrated the importance that food has on health. Nevertheless, the differing scientific results obtained from these specific research areas may sometimes create uncertainty amongst consumers and may also have an impact on food choice (rightly or wrongly).

In order to regain consumers' trust, it is important to control food at the highest level. Today's consumers increasingly expect healthy and safe food and demand information about the origin of their food products. In order to restore consumers' confidence in food safety and to meet the consumers' manifold expectations (that food must be, for example, fresh, wholesome, safe and low cost), food policy must consider consumers' interests and concerns. The 'farm-to-fork' approach and the more recently discussed

reversed chain ('fork-to-farm' or 'plate-to-the-farm') should take consumers' demands into account, and this feedback should filter right back up the food chain to the regulatory bodies.

Legislation established in Europe and worldwide is aiming to establish the right framework to deal with issues as diverse as setting maximum limits for contaminants (e.g., from natural and industrial sources) and maximum residue limits (e.g., for pesticides and veterinary drugs), to establishing procedures for authorisation of food and feed additives. The national food authorities are responsible for the appropriate implementation of legislation. In light of recent European food scares, it is very important to retain an appropriate number of food control bodies, or even to increase food inspection bodies at the national level. It is up to the individual country how food inspection is carried out, whether through official national food laboratories or designated private ones.

Due to increasing European and worldwide standardisation of analytical methods and the availability of test and reference materials such as pure chemical standards and food matrix materials, the quality of analytical data obtained in various laboratories is becoming more and more comparable. Methods are validated through collaborative trial testing and are available either from the scientific literature, standardisation bodies or national method collections. Reference materials, especially pure chemical standards, are available through commercial suppliers of chemicals, but thanks to specific European projects and the collaboration of European food control laboratories methods and reference materials are increasingly being developed and made available to those who need the information.

Proficiency tests organised by commercial providers or increasingly by the European Community and National Reference Laboratories (CRLs and NRLs) are another tool to ensure the comparability of analytical results and the quality of data in European and other international databases. The latter is of utmost importance for exposure and risk assessment carried out in Europe through national risk assessment bodies as well as through the recently established European Food Safety Authority (EFSA). Food control laboratories also ensure the authenticity of food products and detect malpractice and fraud.

Although elaborate infrastructure is in place to ensure that the food people buy starts out safe, it must be stressed that it is the responsibility of the individual consumer to ensure that the quality and safety of food which finally ends up on her/his plate is still as high as possible. Even assuming that the consumer is spending less time on preparation of food, as convenience food is increasingly available on the market, food must be properly stored, prepared and cooked before consumption.

Increasing consumer education on appropriate handling of food, especially with regard to impact on health from microbial contamination, is necessary to ensure a high quality not only from the farm to the supermarket but also from the market to the fork.

Safety is not the only food-related issue facing us today. Functional foods are those intended to be consumed as part of a normal diet but which contain biologically active components offering the potential to enhance health or reduce risk of disease. Examples of functional foods include products containing specific minerals, vitamins, special fatty acids or dietary fibre, phytochemicals, probiotics and substances with antioxidant activity, such as polyphenols.

With new products in this food category appearing increasingly on the market, interest is also turning to the development of standards and guidelines for the production and promotion of such foods. Health claims for functional foods are currently under discussion not only within Europe but also

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worldwide. But before we can make recommendations on daily intake of functional foods, better data on efficacy and bioavailability of those compounds are crucial.

Although food safety and quality control is very important in minimising toxic components in food and preventing food fraud, the individual consumer is still responsible for his or her own healthy diet. This responsibility includes the appropriate storage and preparation of food products at home as well as a healthy diet. The societal and economic impact of an inappropriate diet, e.g. leading to obesity, is already visible in many parts of the world. On the other hand, scientists have a responsibility to ensure that accurate and consistent information about scientifically sound food safety aspects including nutritional matters is communicated to consumers as well as to the media. Contradictory results have to be investigated with care and avoided as much as possible.

An effective infrastructure to regulate food is already in place in Europe, but a few outstanding areas need attention. First, it is absolutely essential to gain more information on consumers' perception of food safety matters and trust in nutrition experts' advice; it will be difficult to change the messages if we are still uncertain how they are being received and acted upon. Moreover, education remains an important focus, not only about post-purchase food safety and functional foods, but also about how inappropriate diet can lead to chronic lifestyle diseases which, if unaddressed, will have an impact on society and the economy.

(Cited from Elke Anklam, "Food safety control and dietary habits", Journal of the Science of Food and Agriculture, Volume 87, Issue 3, 2007. Pages: 363-365.)

41. Who is responsible for the appropriate implementation of food legislation? (A) the national food authorities, (B) the consumers, (C) the food scientists, (D) the food industry.
42. The food sector has grown increasingly complex due to (A) greater demands for food safety, (B) new technology, (C) both of the above, (D) none of the above.
43. Consumers are overwhelmed with information about (A) a wide variety of food products, (B) quality of food products, (C) different kinds of dietary recommendations, (D) none of the above.
44. What is the most important responsibility of scientists? (A) to ensure that profitable information is communicated to the food industry, (B) to ensure that new information is communicated to the national food authorities, (C) to investigate and obtain data, (D) to educate the consumers.
45. Differing scientific results obtained from researches may (A) have an impact on rightly food choice, (B) create uncertainty amongst consumers, (C) have an impact on wrongly food choice, (D) all of the above.
46. Which is the least expectation of consumers on food? (A) tasty, (B) wholesome ,(C) safe, (D) low cost.
47. Consumers worldwide are increasingly interest on (A) food price, (B) food quality, (C) both of the above, (D) none of the above.
48. The analytical data obtained in various laboratories is becoming more and more comparable due to (A) availability of new methods, (B) availability of good analytical instruments, (C) proficiency tests, (D) all of the above.
49. Who is responsible for a consumer's healthy diet? (A) the consumer, (B) the food industry, (C) the national food authorities, (D) all of the above.
50. How does the author think about the European food? (A) good, (B) fair, (C) not so good, (D) no comment.

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