

SusCooks



TRAINING FOR SUSTANABLE COOKING

SusCooks Course Modules

Edited English Text Version



Module 1: Cooks can Change the World

Unit 1: The role of the cook in driving positive change

To highlight the vital role cooks can play in improving people's health and wellbeing and reducing the local and global ecological impact of the food system by adapting what they cook and how they cook it, while still serving delicious meals.

Unit 2: The social, economic and environmental impacts of food

To develop an understanding of the negative social (including health), economic and environmental impacts modern food culture and the food system have on people, places and the planet.

Unit 3: What we mean by sustainability and sustainable food?

To explore what is meant by sustainability and sustainable development and introduce key aspects of sustainability for all the main food groups - from production through to final service.

After finishing this module I will have learnt about:

1. The scale and impact of the catering industry and the vital role that cooks can therefore play in improving our food culture and system.
2. Why our current food system is not sustainable and some of the negative impacts it is having on our health, environment, society and economy.
3. What our food culture and food system might look like if it were based on sustainable production, processing, transportation and waste management.

Unit 1: The role of the cook in driving positive change

In this unit I will learn about:

1. The community of cooks in Europe and their share in the economy.
2. Why cooks have such an important role in our food culture and system.
3. The beneficial impact cooks can have by changing what and how they cook.

Introduction to the topic:

Whether in schools or hospitals, restaurants or work-place canteens, catering accounts for almost 50% of all the food we consume, so it is impossible to overstate how important cooks are in shaping both our food culture and our food system. Through their everyday decisions on what and how to cook and as the ambassadors of 'good food', cooks have a uniquely important role to play in improving the health of people and the planet. Cooks really can change the world for the better.

Chapter 1: Cooks have a central role in our food system

Lesson 1: The size of the food and drink service sector

Page 1

There were around 1.5 million food and beverage consumer service businesses in the EU-27 in 2008. Between them these businesses had a combined annual turnover of over 300 billion Euros and about four million people are employed in the restaurant and mobile food service sector alone. 90% of these food enterprises are small often family-run businesses with between one and nine employees.

Page 2

With so many food-serving businesses and such a huge economic impact, it is obvious that the combined actions of cooks and caterers across the sector could have a truly transformational impact on our food culture and system. And with millions of smaller, independent businesses - where cooks, managers and staff have greater freedom over what and how they cook - the potential for positive change is almost limitless.

Lesson 2: The key role of cooks in driving positive change

Page 1

As the gate-keepers between producers and consumers, cooks have a unique influence on both food culture (what people want to eat) and the food system (how food is produced, processed and distributed). In deciding what produce to buy, from where and from whom, the cook can affect the entire food chain, right back to the farmer. And in deciding what to serve and promote, they can also have a huge impact on consumer knowledge, preferences and expectations and can help to foster an appreciation of and demand for 'good food'.

Page 2

In the following chapters we will start to explore how your actions as a cook can positively impact the food system through four discrete areas of work - menu planning, food procurement, meal preparation and food promotion - which succeeding modules will then look at in more detail. Every cook has a vital role to play if we are to achieve a healthy food culture and a sustainable food system but, in doing so, they may also

discover new interests and inspiration and new opportunities to develop their knowledge and skills in their search for culinary excellence.

Chapter 2: The cook's role in menu planning

Lesson 1: Responding to and influencing customer expectations

Page 1

In planning menus, cooks have to understand customers' needs, tastes and preferences in order to offer suitable and attractive meals. These vary significantly between customers and are affected by factors such as age, cultural background, religious belief, special dietary requirements, lifestyle trends and the particular setting (e.g. school, hospital, restaurant) the cook is working in - *see module 2*.

Page 2

Responding to customers' need and preferences is a good way to increase demand and can help improve the viability and/or profitability of any catering business. But as well as 'responding', cooks also have a responsibility for 'encouraging' customers to change their eating habits towards more healthy and sustainable food. The ideal, of course, is to provide delicious food for your customers made from healthy and sustainable ingredients but that also responds to their individual tastes and preferences. More and more cooks are finding ways to achieve this.

Lesson 2: Moving towards healthy and sustainable food step by step

Page 1

Menu planning lies at the heart of transforming your food offering and drives all other impacts of your food business. But improving the health and sustainability of your food offering should only be undertaken through a careful, step by step process so you don't try to achieve too much all at once. Making incremental changes to menus not only ensures you don't put off your existing customers but also prevents you from being overwhelmed by new ideas, skills and approaches, thus reducing any dangers immediate whole-scale change may make to your business.

Page 2

Acquiring the knowledge and skills needed to plan and produce truly healthy and sustainable meals takes time, but once you have them they will enable you to serve more delicious food to more customers at the same or a lower ingredient cost as before but with higher levels of nutrition and a much more positive impact on the local and global environment.

Chapter 3: The cook's role in food procurement

Lesson 1: Protecting the environment through food procurement

Page 1

In deciding what kind of food they buy (procure) and when and where they buy it from, cooks have the power to significantly reduce the negative impact our food system has on the environment. By choosing fresh and unprocessed, local and seasonal, organic and sustainably sourced produce, cooks can drive upstream changes to food production,

processing and distribution that help to protect and restore wildlife and natural resources, such as soils, forests, oceans and atmosphere.

Page 2

Buying sustainable food requires the ability to identify products and understand logos, which can be confusing as there are lots of different labels and certification schemes for different types of product at both a European and at a national level. It also requires knowing where to buy sustainable food from, as often new suppliers need to be found and you need to be sure of a ready, affordable and secure supply of these products year-round to prevent any damage to your business. Again, acquiring these new skills in procurement takes time, but they can make a big difference to the attractiveness of your food offering while protecting the environment - see *module 3*.

Lesson 2: Supporting your local economy through food procurement

Page 1

Buying sustainable locally produced food can help your business build strong and mutually supportive relationships with local producers, processors and traders. This not only helps to create jobs and prosperity by increasing the flow of money in the local food economy but also gets people talking about the positive impact your business is having on your local community – a great way of attracting more customers.

Page 2

As well as adding to the distinctiveness and attractiveness of your food offering, serving locally produced and processed food reduces your dependence on international supply chains that are under increasing threat from food insecurity and rapid changes in food prices resulting from international commodity speculation and market failure. So, rather than being an anonymous business trading with intermediaries from around the world, why not make the most of some of the amazing produced that is available a little closer to home?

Chapter 4: The cook's role in meal preparation

Lesson 1: Using ingredients efficiently and effectively

Page 1

It is not only your choice of products that contributes to sustainable cooking but also how you use them. Knowing how to prepare nutritionally-balanced meals made from a wide variety of fresh, seasonal, local, organic and sustainably-sourced ingredients while minimising waste and maximising interest and flavour is at the heart of every successful sustainable food kitchen.

Page 2

The individuality and therefore attractiveness of your food offering is naturally encouraged if you use local and seasonal ingredients, as dishes must be designed according to what is available. You may also start to explore, and acquire the skills to use, more parts of a product - especially in terms of unusual cuts of meat but also parts of vegetables that are normally thrown away - which will not only make your meals more varied and interesting but will also reduce waste and the cost to you - see *module 4*.

Lesson 2: Managing your kitchen efficiently

Page 1

Sustainability in the kitchen has many aspects, from energy and water efficiency to choosing environmentally-friendly cleaning products and reducing, reusing (including preserving) and recycling food that would otherwise be wasted. This means knowing which kitchen appliances and techniques are most efficient and requires a careful study of the kitchen to identify energy and resource inefficient operations.

Page 2

Making changes to how you manage your kitchen are not easy. Many of the preparation techniques you currently use will be ingrained and there can be high up-front costs in replacing appliances. Again, the key is to make changes step by step, identifying and prioritising the things that are easiest to change and that will bring the greatest benefit to your business, before tackling some of the harder or more costly challenges.

Chapter 5: The cook's role in promoting good food

Lesson 1: Don't just do it, talk about it!

Page 1

The best way to reap the rewards of your efforts in sustainable cooking is to make people aware of it. This means communicating to your customers through promotional activities that highlight the quality and integrity of your ingredients. Consumers are increasingly interested in sustainable food, so it is important to be able to tell the 'story' behind the food you serve that inspires existing and potential new customers - see *module 5*.

Page 2

To successfully promote your business and your food sustainable food offering you need to create a sustainable food culture in your kitchen that all your staff understand, buy into and are motivated to deliver. Continuous professional development that empowers your staff and gives them the skills they need is the key to a vibrant and successful food service business. If you treat your staff as your food champions, they will champion your food and your business.

Test:

- **Question 1** What do the current trends in consumer behaviour show?

Answer: That the share of catered meals we consume is decreasing

Answer: That the share of catered meals we consume is increasing

Answer: That the share of catered meals we consume is stable over the years

- **Question 2** What is a sustainable food strategy for your restaurant?

Answer: It is a way to reduce costs by buying the cheapest products from around the world to increase the profit-margin

Answer: It involves the industrialisation and standardisation of menus in order to increase the efficiency and productivity.

Answer: It involves understanding the nutritional value of food, the impacts of processing and of cooking on these, how to preserve food or how to plan according to seasons.

- **Question 3** Who benefits from your sustainable procurement?

Answer: Your local community and economy

Answer: Multinational food companies and shareholders

Answer: Your business only

- **Question 4** Acquiring sustainable food preparation skills means...

Answer: ...increasing the share of processed food you use to prepare your meals

Answer: ...being strictly focused on energy consumption

Answer: ...knowing your food, how to cook it, prepare it and conserve it to reduce waste and make the most of what you have.

- **Question 5** The sustainable ethic of your kitchen should be shared to...

Answer: You, the cook, and your kitchen staff

Answer: You, your kitchen staff and the waiting staff

Answer: You, your kitchen staff, the waiting staff and your customers

Unit 2: Social, economic and environmental impacts of food

In this unit I will learn about:

1. How our current food system works and why this is a problem.
2. Negative impacts of this system on our health, society, economy and environment.
3. The fragility of our food system and the dangers that we face in future.

Introduction to the topic:

The unhealthy and unsustainable character of our food system has many causes, including:

- the industrialisation of agriculture and its total dependence on non-renewable resources such as oil and phosphorous;
- the falling productivity of our farmland due to climate change and the degradation, depletion and pollution of our soils, oceans and fresh and groundwater; and
- the tendency of transnational food companies to focus on selling highly processed and packaged food products that maximise profits but also pass on significant hidden costs in the damage they do to people's health, to local economies and to the environment.

Chapter 1: Health impacts of our food system

Lesson 1: We are what we eat

Page 1

The negative health impacts of our food system are well-documented and have two main aspects. The first is the change in our diet, with a rapid growth in the consumption of highly processed 'junk' food, which tends to contain high levels of salt, sugar and fat. A study by the United Nation's Food and Agriculture Organisation has shown that people in Mediterranean countries are now consuming about 30% more calories than they did 40 years ago, primarily because of the growth in junk food.

Page 2

The second is linked to the increasing use of chemicals in the way our food is produced, processed, preserved and packaged. Recognition of the potential negative health impacts of these chemicals has been growing steadily since the 1960s. Scientists have found increasing evidence of a link between these chemicals - which can often react to each other in unpredictable ways known as the 'cocktail effect' - and chronic diseases such as cancer, heart disease and neurological disorders.

Page 3

Observations have shown that deaths from life-style inflicted chronic diseases are decreasing steadily, partially as a result of increasing public awareness of the importance of healthy lifestyles, including healthy eating. However, further improvements in the quality of food we eat are desperately needed as chronic diseases continue to be a major cause of death across Europe.

Page 4

Heart disease, which has been clearly linked to a diet rich in saturated fats and sugar and poor in fruit and vegetables, is the primary cause of death in Europe. Some forms of cancer, which is the second biggest cause of death, may be linked to carcinogens used in the food and agriculture sector such as pesticides and herbicides, as well as to artificial preservatives and packaging residues. Another serious public health concern is diabetes, which has also been clearly linked to diet and now affects approximately 10% of people in Europe and is rising rapidly. And all of these chronic diseases are aggravated by obesity and being overweight or obese - about half of all Europeans are now overweight and nearly a quarter obese.

Lesson 2: Troubling perspectives for our future health

Page 1

Unless we change what we eat, we will face a rising tide of food-related crises in the future. The costs of treating diet related ill-health are already at unprecedented levels and as they continue to grow they will become completely unsustainable, with hospitals and health care departments simply unable to provide treatment to all those in need.

Page 2

The widespread use of antibiotics to speed growth in livestock is also contributing the emergence of anti-biotic resistant germs that could put our entire modern health care system at risk. According to the European Centre for Disease Prevention and Control, antimicrobial resistance (AMR) currently results in approximately 25,000 deaths a year and without concerted action we could soon see a return to the days when even a minor infection could kill.

Page 3

Food poverty - which is broadly defined as not being to afford or access a healthy meal - is also growing rapidly. The industrialisation of the food system has led to highly processed foods becoming relatively cheaper than less processed, more healthy alternatives and, in the face of falling or static real incomes combined with rising food costs, many Europeans are being condemned to an unhealthy, high calorie diet and the malnutrition and chronic diseases this brings.

Chapter 2: Social and economic impacts of our food system

Lesson 1: Concentration and fragility in food production

Page 1

In the face of global competition and increasingly industrial and mechanised farming techniques, many smaller scale family farms have been unable to compete and had to sell their farms, leading to a 50% decrease in the total number of farms in Europe since the 1950s and a 12% reduction between 2007 and 2013 alone. While these smaller farms have mostly been absorbed into larger holdings, the resulting mega-farms require less labour. This has resulted in huge job losses in agricultural and caused the social and economic disintegration of many rural areas.

Page 2

Research has shown that if people buy their food from small-scale local farmers this creates what is known as a 'multiplier effect', so that every pound spent brings a 400% benefit to the local food economy. How cooks and caterers procure their food can

therefore have a profoundly positive impact on the lives of local producers and other businesses, as well as to the wider community.

Lesson 2: The inexorable rise of supermarkets and processed food

Page 1

The huge size, scale and complexity of the modern food system mean that consumers are increasingly disconnected from how and where their food is produced. Over 80% of the food we now buy is from supermarkets, compared to less than 50% only 25 years ago. The growth in supermarkets has forced many independent food retailers - such as butchers, bakers and grocers - out of business. This has created both food deserts - where there are no nearby shops selling affordable healthy food - and clone towns - where local high-streets lose their identity and are taken over by national and multinational retailing chains.

Page 2

With their focus on highly processed and packaged food, the proliferation of supermarkets and fast food outlets has also helped to drive increased consumption of ready meals and junk food – approximately one third of all meals consumed in Europe are now purchased in their finished form. As well as contributing to obesity and diet-related ill-health, this has also led to a loss of basic cooking skills to the extent that many individuals and families are longer interested in or able to cook or share meals.

Page 3

With so many links in the food chain between the producer and the consumer and such a complex global food system, it is not surprising that food safety scares are becoming more commonplace and that it has become almost impossible to tell what our food contains or where it has come from. The horse meat scandal and the battle over GM-labelling are just two of the most recent examples of hoe opaque modern food supply chains have become.

Chapter 3: Environmental impacts of our food system

Lesson 1: Eating fossil fuels

Page 1

In the modern food system, every stage in the food chain is now entirely dependent on non-renewable fossil fuels, and particularly oil - from the pesticides and fertilisers, tractors and harvesters needed for production to the industrial machinery used for food processing, manufacturing and packaging and the lorries that carry our food from depot to supermarket. We are, almost literally, eating oil.

Page 2

While using fossil fuels in this way has enabled us to significantly increase the total amount of food produced, it is an increasingly inefficient process. In 1940, 1 calorie of energy was needed to produce 2.3 calories of food. Today, 7.3 calories of energy are needed to deliver 1 calorie of food. Or, to put it another way, it now takes 1,500 litres of oil to produce a 500kg cow. Such an approach was hugely effective throughout the second half of the 20th century when oil was cheap and abundant, but with more and more competition for what will soon become diminishing resources of oil, over the past

decade food prices have been rising inexorably and can only continue to do so in the years ahead. The era of cheap and plentiful food may be coming to an end and if we cannot find a ready alternative, the consequences could be catastrophic.

Lesson 2: Considering future generations

Page 1

The unsustainable nature of our current food system means that the choices we make today will have a significant impact the lives of future generations. The negative effects we are already having in terms of climate change and depletion and pollution of our soils, forests, oceans, freshwater and groundwater resources will be felt for many lifetimes and may make it virtually impossible for future generations to feed themselves without causing yet further damage to their environment and natural resources

Page 2

Climate change is believed by many to be the greatest threat facing humanity today. The global average concentration of greenhouse gases (GHG) in the atmosphere is rapidly increasing and, if one includes the effects of deforestation, food and agriculture is responsible for as much as 30% of those emissions. According to the IPCC, the atmospheric concentration of GHGs must not rise much more if we hope to avoid the potentially catastrophic effects of a more than 2°C rise in global temperatures. It is inconceivable that we can achieve this unless we significantly reduce emissions from food and agriculture.

Page 3

The 2°C target is a threshold beyond which scientists believe climate change will be accentuated and even more unpredictable, with heat waves, violent storms and floods becoming more frequent. This would have a disastrous impact on agriculture production - particularly as so much of it is based on very vulnerable mono-culture systems (where only one crop is grown over a vast area) - and could lead to widespread famine in many parts of the world.

Page 4

Even without the effects of climate change, the productivity of our agricultural land is already falling as a result of intensive and industrial farming practices. Excessive water extraction from rivers and ground water sources and water pollution due to high nitrate concentrations from artificial fertilisers are now serious problems across Europe, leading to the salinization and eutrophication of soils which no longer support plant growth.

Page 5

Unsustainable land management such as deforestation and overgrazing are also leading to significant soil erosion and degradation, which now affects nearly one fifth of Europe's land area. If the soil we depend on to feed and clothe ourselves continues to be degraded, it will make it even harder for future generations to feed themselves.

Page 6

Industrial farming has also had a devastating impact biodiversity, with land clearance and the effects of pesticides and herbicides recognised as the major cause of habitat loss and species extinction. Though the extinction of species is a natural phenomenon, the rate at which species are disappearing today is unprecedented and scientists now

refer to the modern era as the 6th mass extinction - the last one being the extinction of dinosaurs.

Page 7

Modern agriculture - and its tendency to focus on only the highest yielding varieties of plants and breeds of animals - is also reducing the diversity and therefore resilience of our food system. Hundreds of traditional breeds of animal and plant cultivars have already been lost and if there is no market for those that remain they will continue to die out, leaving us dependent on an increasingly small genetic pool that is vulnerable to disease and environmental changes.

Test:

- **Question 1** In Europe, our life expectancy in good health has...

Answer: increased in the past decades

Answer: decreased in the past decades

Answer: remained fairly stable in the past decades

- **Question 2** Which of the following statements is correct?

Answer: The trend is towards an increase in the number of farms, in their size and in the number of people they employ

Answer: The trend is towards a decrease in the number of farms but an increase in their size and in the number of people they employ.

Answer: The trend is towards a decrease in the number of farms, an increase in their size and a decrease in the number of people they employ.

Question 3 What percentage of the food produced is wasted every year?

Answer: 20%

Answer: 50%

Answer: 70%

- **Question 4** How many calories of energy are needed to deliver 1 calorie of food today?

Answer: 1 calorie

Answer: 4.5 calories

Answer: 7.3 calories

- **Question 5** Agriculture is responsible for ?% of the increase in greenhouse gases (GHG) in the atmosphere?

Answer: 3%

Answer: 10%

Answer: 25%

Unit 3: What we mean by sustainability and sustainable food?

In this unit I will learn about:

1. How sustainability, sustainable development and sustainable food are defined.
2. Low impact and beneficial food production, processing and preparation.
3. Growing consumer interest in healthy and sustainable food.

Introduction into the topic:

In the face of the multiple threats to the integrity of our local and global environment and to the future of our food, there is a growing recognition that we must tread a more sustainable path and seek alternative ways of alternative systems for feeding ourselves. In this unit we will explore what is meant by sustainability and sustainable food, look at how different approaches to food production, processing and preparation can provide cooks with a range of opportunities to help create a more sustainable future while benefitting both their customers and their business.

Chapter 1: Definition of sustainability and sustainable food

Lesson 1: What is sustainability?

Page 1

The Stockholm Summit held in 1972 was the first in a series of conferences of world leaders and NGOs that discussed the emerging issue of a 'sustainable development'. The term 'sustainable development' became widely known after the Rio Earth Summit in 1992. First coined in the Brundtland report, it is defined as a development which "meets the needs of the present without compromising the ability of future generations to meet their own needs". Sustainable development is often characterised by three pillars - ecological, social and economic - to which we can add an additional health pillar as it is crucially important aspect of our food.

Page 2

The food system is a major topic in sustainability, since eating is one of humanity's most basic needs and sits at the heart of our physical, social and cultural lives. To remain healthy, we need a continuous supply of high quality nutritious food, which has to be grown, processed, distributed, eaten and disposed of. In the context of sustainable development, how we choose to organise these various aspects of our food system is therefore critical.

Lesson 2: What is sustainable food?

Page 1

There is no universally accepted definition of sustainable food but it is generally recognised that it should - in the ways that it is produced, processed, transported, prepared and disposed of - minimise negative and maximise positive health, social, economic and environmental impacts. Fundamentally, sustainable food should reflect the basic tenets of sustainable development, namely to meet the needs of the current generation without compromising the ability of future generations to meet their own needs.

Page 2

Since the food system is so complex, sustainable food necessarily incorporates a lot of different issues. Fresh, seasonal, local, organic and fair trade are certainly parts of what could be seen to constitute sustainable food, but there are many other issues that also need to be considered such as healthy diets, animal welfare, water and energy efficiency and waste reduction. In fact the list of sustainable food issues is also limitless and ultimately the definition of sustainable food must be left up to the individual interpretation.

Page 3

Since sustainability is more about a direction of travel than a specific destination, the lack of a clear definition of sustainable food leaves cooks the freedom to explore issues for themselves and to work on those aspects of health and sustainability that are most important to them. In the following chapters we will explore some of the more commonly recognised aspects of sustainable food production and processing.

Chapter 2: Reducing the negative impacts of food production

Lesson 1: Organic, local, seasonal?

Page 1

Organic farming methods use virtually no artificial pesticides or fertilisers and are therefore better for wildlife and habitats than conventional farming. By rotating crops and using compost, leys and manure as natural fertilisers, organic farming helps to conserve soil and water and requires a lower input of fossil fuel energy, which creates a more efficient production system. Organic farming also prohibits the use of genetically modified organisms (GMOs). The production methods and criteria for qualifying as organic are legally defined in the EU, so that all products labelled as organic meet a minimum standard.

Page 2

In very general terms, food produced near to where it is bought and consumed is likely to have a lower environmental impact - particularly in terms of its carbon footprint - than food produced further away. A product's carbon footprint reflects the amount of greenhouse gases that are emitted during its life-cycle, which includes its production, processing, storage, distribution, consumption and disposal. Products with a lower footprint make a smaller contribution to climate change and are therefore more sustainable. But while locally produced food is likely to be more sustainable, it is not always the case. For example, vegetables produced in a heated greenhouse locally out of season may in fact have a higher carbon footprint than those produced naturally in hotter parts of the world and then transported, so it is worth thinking about the balance of different factors affecting a product's carbon footprint before deciding what to buy.

Page 3

The potential sustainability benefits of local food are not just about its carbon footprint. Because of the reduced time between harvesting and consumption, local food will be fresher, so its nutritional value will be higher and it is likely to contain fewer of the preservatives needed to keep food fresh on long journeys. It should also be much tastier – a vital ingredient for cooks. Local food will, if it is not produced artificially, be seasonal and therefore reflect your local growing conditions and food heritage. When local

produce is in season there may well be a surplus, so buying local seasonal food can help you to reduce your costs as well as helping to give your food offering a unique identity – ‘local flavour’ - that is often of great interest to customers.

Lesson 2: Ethical issues – fair trade and animal welfare

Page 1

For many people, ethical issues such as fair trade and animal welfare are key aspects of sustainability and should be considered by any cook working to increase the sustainability and integrity of their food offering. There is no universally accepted definition of fair-trade. One definition is that of “a trading partnership, based on dialogue, transparency, and respect that seeks greater equity in international trade”.

Page 2

Whatever one’s definition, however, fair trade involves farmers and farm workers - both at home and abroad - being paid a decent wage for their labour and a greater share of the final price of the product when it is sold. It also often includes commitments to better working and living conditions, access to education for farm workers’ children and higher environmental standards. ‘Fairtrade’ is now a global brand and sets the international benchmark on this issue, but it is not currently applied to European farmers and farm workers.

Page 3

High animal welfare is also seen by many as a key aspect of sustainability and there is increasing public concern about the conditions in which animals are being raised for food production. In a system that drives to minimize costs and maximize profits, poor animal welfare has become the norm with animals reared in cramped and unnatural factory conditions that lead to high levels of stress. Every year, 300 million pigs, sheep and cattle and over six billion birds are killed in the European Union’s slaughterhouses, so poor animal welfare affects huge numbers of individual animals.

Page 4

Since the Lisbon Treaty in 2007, legislation has been introduced based upon the premise that animals are sentient (conscious) beings. As a result, it is now a legal requirement across the EU that animals should be spared avoidable pain and suffering but the vagueness of the legislation means there continue to be many instances of poor animal welfare and the required minimum welfare standard is set very low compared to systems such as organic. As a result millions of animals are still reared in what many people would perceive as appalling conditions. Most European countries have a range of welfare standards related to different accreditation schemes so it is worth becoming familiar with these in your own country.

Chapter 3: Reducing the negative impacts of food processing

Lesson 1: The rise of processed food

Page 1

Processing food adds value in terms of the amount that food companies can charge for the final product and therefore increases their profit. This has led more and more our food to be highly processed and to contain high levels of sugar, salt and fat as well as fillers and preservatives, which are bad for our health. People whose diets are primarily

based on processed foods tend to consume more meat, which has also been implicated in certain diseases including heart disease and cancer. Processed foods is, by necessity, also highly packaged which means they have a bigger ecological footprint in terms of the amount of resources used and the amount of waste produced, so they are also worse for the environment.

Page 2

One way of reducing the artificial additives, preservatives, flavourings and colours in processed food is to choose organic products for which there are strict limitations on what can be added during processing, but the best way to avoid the negative health and environmental impacts of processed food and to benefit from the lower costs of unprocessed ingredients is to cook from scratch.

Lesson 2: Cooking from scratch

Page 1

Cooking from scratch - that is to cook from raw and minimally processed ingredients - brings a wide range of health, environmental and economic benefits. Meals prepared from fresh ingredients are more nutritious than processed food and, most importantly for cooks, they taste better. The wide choice of fresh and raw ingredients - many of which you will never see in a processed product - provides endless opportunities for cooking different meals which helps to foster a more varied and therefore healthier diet. Cooking from scratch also gives us control over the amount of salt, sugar and fat we consume and reduces our intake of harmful artificial additives.

Page 2

Since fresh ingredients have a lower ecological footprint than processed foods, cooking from scratch has a much lower impact on the environment, particularly if those ingredients are local, seasonal, organic and - in the case of sea fish - sustainably sourced. Using raw ingredients to cook from scratch is also cheaper than buying processed food even though this is not always obvious at first sight. Cooking from scratch generates skills that enable cooks to use raw ingredients very efficiently and to preserve left over ingredients for use in other meals. When one considers that a large proportion of the price paid for a processed product is for the packaging and that the majority of leftover processed food is thrown away, cooking for scratch provides a great opportunity for producing better quality, healthier meals with less waste and lower cost.

Lesson 3: The benefits of a reduced meat diet

Page 1

Meat production and cereal production are in competition for the world's limited agricultural land and cereal production for livestock feed is in competition with cereal for human consumption. With 7kg of cereals needed to produce 1kg of beef and 4kg of cereals needed to produce 1kg of pork, our increasingly meat-based diets are not only negatively affecting our health but putting huge pressure on fragile ecosystems.

Page 2

With the rapid rise in meat consumption set to continue, farmers have only two responses: farm their existing land even more intensively - by adding ever increasing amounts of fertiliser and pesticide - or replace forests and savannahs with more farmland. As well as being the primary cause of biodiversity loss, as has been so clearly

illustrated by the experiences of Brazil and Indonesia in recent years, both these responses are leading to irreversible depletion and degradation of soils and fresh/groundwater resources, which further limits future generations' ability to produce sufficient food.

Page 3

While customers have become used to eating more and more meat, there are lots of ways to reduce the amount of meat in menus while maintaining quality and flavour. As well as using meat substitutes, many cooks are also introducing meat free options and even meat free days to their weekly food offering with little, if any, negative impact on their customers' enjoyment. With the high cost of meat ingredients and the huge health and environmental benefits of lower meat consumption, reducing the amount of meat in their menus is possibly the most cost-effective way for a cook to improve the health of people and the planet.

Chapter 4: Food trends

Lesson 1: Growing consumer interest in health and sustainability

Page 1

Understanding consumer trends is vital if cooks and catering businesses are to anticipate and respond to changing consumer preferences. A study conducted to identify consumption trends for 2010- 2020 highlighted eight areas of growing consumer concern including sustainability and health and well-being.

Page 2

With food issues discussed in the media on an almost daily basis and with easy access to information via the internet, it is unsurprising that public awareness of, and concerns about, sustainability issues are growing. As a result, consumers increasingly expect to be told about how food products are made and what ingredients they contain - especially on key issues such as their carbon footprint and whether they contain additives, pesticides or GMOs - and are increasingly choosing the more sustainable options.

Page 3

Public awareness of diet-related diseases such as like obesity, diabetes, heart disease and cancer is also growing and there is no doubt that health and wellbeing is and will continue to be the primary concern for many consumers. In a recent survey, the food issues which most respondents wanted more information on were food safety, quality and provenance (where the food has come from), which reflect the consumer fears and frustrations about not knowing where their food comes or what it might contain.

Page 4

Current trends suggest that more and more consumers will demand healthy and sustainable food in the years ahead. This provides an excellent opportunity for cooks to become the champions and drivers of change across the entire food chain and to reap the personal and business rewards of serving and promoting delicious food that is good for people and good for the planet.

Test:

- Question 1 What percentage of the total utilised agricultural area in Europe is cultivated organically?

Answer: 5.4%

Answer: 10.5%

Answer: 19%

- Question 2 What is the best measure of sustainability of the food system?

Answer: Carbon Footprint

Answer: Food miles

Answer: Pesticide residue levels

- Question 3 Buying raw ingredients to cook from scratch is...

Answer: Healthier and more expensive

Answer: Healthier and less expensive

Answer: Less healthy and more expensive

- Question 4 Producing 1kg of beef requires an average of ...

Answer: 2 560L of water

Answer: 4700L of water

Answer: 9 680L of water

- Question 5 Consumer concern for the sustainability of our food system...

Answer: has been steady in the past decade

Answer: has increased in the past decade

Answer: has decreased in the past decade

Glossary of terms

Biodiversity or biological diversity is the term given to the variety of life on Earth. It is the variety within and between all species of plants, animals and micro-organisms and the ecosystems within which they live and interact.

Food and beverage consumer service is a collective term covering restaurants, take-away or fast-food outlets, coffee shops and bars, as well as workplace, hospital or school canteens, event catering services and food service contractors.

Food desert is defined as a neighbourhood with little or no access to groceries stores that sell affordable fresh food. Often such areas are dominated by fast-food outlets, take-aways and convenience stores with little or no fresh produce.

Genetically Modified Organisms (GMOs) are organisms, such as plants and animals, whose genetic characteristics have been modified artificially in order to give them new characteristics. Food and feed which contain or consist of GMOs are known as GM.

Monoculture describes the practice of producing only one variety of crop, such as corn, wheat or rapeseed, on any given farm or agricultural area and relying on a very small number of genetic variants or cultivars of that crop.

Organic farming is a system of farm management and food production that uses natural processes and minimises the use of artificial inputs. It combines good environmental practices and the application of high animal welfare standards

Pesticide refers to the chemical substances used to repulse, destroy or fight against pests and undesirable species of plants and animals causing damage to crops. There are also herbicides, which are chemicals sprayed to destroy unwanted plants.

Preservative is a chemical substance used to preserve foods or other organic materials from decomposition or fermentation. It is one of a number of forms of chemical food additive, that also include artificial sweeteners, colours and flavourings.

Resilience is the capacity of a system to absorb disturbance and reorganise while undergoing change, so as to retain essentially the same function, structure, identity and feedbacks and remain in a healthy state.

Module 2: Planning - Let's get started!

Unit 4: Understanding your customer

To explore different customers' needs and preferences, consumption trends and the limits and opportunities for healthy, ethical, sustainable and local food in different settings, from restaurants to public sector catering.

Unit 5: Balancing health, sustainability and cost

To enhance learners' appreciation of the wide range of opportunities for designing nutritionally balanced meals that use more ethical and sustainable ingredients while improving quality and taste and keeping costs down.

Unit 6: Menu planning for step by step change

To help learners understand how to gradually incorporate more and more healthy and sustainable ingredients and meals into their weekly and longer term menu cycles as both their skills and their customers' attitudes and expectations change.

After finishing this module I will have learnt about:

1. Current sustainable food and consumption trends and lifestyles and the intrinsic values for the awareness of healthier food and wellbeing, green and fair food,
2. to compose well balanced, tasty and affordable meals, which meet the needs of different target groups and according to guest requests for special meals (vegetarian, vegan, cultural/religious) ,
3. to adapt regional, traditional dishes to meet the needs of modern lifestyle (less fat, less sugar, smaller portions).

Unit 4: Understanding your customer

In this unit I will learn about:

1. Some of the most common current sustainable food trends.
2. The dietary needs of people of different age groups and religions.
3. Some of the most common food allergies and intolerances.

Introduction to the topic:

While great food is great food, it is vital that cooks take into account the needs, tastes and preferences of their customers in designing their menus and it is worth taking the time to think carefully not only about who your core customers are, but also about which of them may have special needs and preferences. Are your customers young, of working age or elderly? Do they have cultural or religious food restrictions or other special dietary requirements? What are their values and convictions related to food, health and the environment? The more you know your customer, the better you can serve them.

Chapter 1: Food trends

Lesson 1: Current sustainable food trends

Page 1

In the face of repeated food-related health and environmental scares, consumer interest in healthy and sustainable food continues to grow. More and more, people don't just want food that tastes great, but that they can trust. Amongst current food trends, environmental sustainability is top of the list. In fact, in recent research diners said they would pay up to 10 percent more for a meal produced in a sustainable restaurant. Some other current food trends are described on the following pages.

Page 2

Fresh, pure and simple

Many consumers want freshly-prepared food made with unprocessed ingredients they can still recognise on the plate. They want food that has had little done to it except to make it edible, using simple recipes and gentle, non-adulterating cooking methods which avoid additives and preservatives.

Page 3

Local and seasonal

More and more consumers want to know where their food comes from and are interested in locally grown seasonal produce that can be traced back to specific farmers or geographic areas. There is also a growing interest in eating communally and celebrating regional food traditions, including local rare breeds, cultivars and specialities.

Page 4

Less meat/higher animal welfare

Concern for animal welfare has grown rapidly in recent years, particularly in issues such as cage-free eggs, free-range chickens, outdoor-reared pigs and sustainably-sourced seafood. Vegetable consumption is also increasing, with over half of women and 40% percent of men now considering themselves to be "flexitarians" (part-time vegetarians).

Page 5

Organic

In some European countries, up to 90 percent of consumers are buying some organic products and the organic market is growing every year. Demand for organic meat, fish and poultry is growing the fastest, due in part to concerns about animal welfare, as well as to fears about pesticide contamination and traceability triggered by the recent horsemeat scandal. A lot of consumers also think organic tastes better and there is growing evidence that it is more nutritious.

Page 5

Nose-to-tail/root-to-stalk cooking

Reducing food waste by using most or all of the animal or plant is a very recent but rapidly growing trend that relates to wider consumer concerns about the food waste at every stage in the food chain, from field to fork. In fact, awareness of the vital importance of avoiding unnecessary food waste has made the 'doggy-bag' (where diners take home their leftovers to eat later) a common sight in today's restaurants.

Further Information: What's hot in 2014? Trend-report of the American Restaurant Association

Lesson 2: Vegetarians and vegans

Page 1

The number of people deciding to no longer eat meat increases every year. Vegetarian dishes contain no meat or fish. Since they consume a ready supply of protein and iron by eating eggs and dairy, vegetarians often have a very healthy and well-balanced diet. Veganism is a type of vegetarian diet that, as well as meat and fish, also excludes eggs, dairy products, honey and all other animal-derived ingredients. Many vegans also do not eat foods that are processed using animal products, such as refined white sugar and some wines.

Page 2

While people often become vegans primarily for ethical reasons, health considerations are also a big factor. Vegans are more likely to have a healthy weight and suffer far less from diabetes, high blood pressure and cholesterol. In menu planning, however, vegans have to find substitute ingredients for the essential minerals and vitamins - including calcium, iron, zinc, iodine and vitamins B2, B12 and D - that they cannot get from meat, eggs and dairy products.

Page 3

Eating out is still difficult for vegetarians and vegans, through more and more restaurants now provide vegetarian and, less often, vegan menu options. Cooking good quality and tasty vegetarian and vegan food takes real skill and expertise, not least because many processed ingredients contain animal products (sometimes in the most unexpected places) and so meals have to be made from scratch.

Further Information: Visit the Vegan Society website.

Page 4

Are vegetarianism and veganism more sustainable? Since it takes far more land, water and energy to produce a kilo of meat than it does a kilo of grain, a global reduction in meat consumption and production would definitely reduce humanity's ecological footprint, as it would help to reduce deforestation, climate change emissions and ground and freshwater depletion. However, there are many parts of the world - including much of Europe - where long-established pasture grazing is the best possible land use in environmental terms as it is resource efficient and often home to a great variety of wildlife. So eating much less but much better quality meat, raised on organic farms, may well be the most sustainable option of all.

Chapter 2: Food and age group

Page 1

To develop to optimum health, people must have nutritious diets, but a person's food needs change over time, not just in nutritional terms but also in aspects such as portion size, how easy the food is to chew and digest and the proportion of different types of ingredients. In communal catering there are often specific recommendations on suitable meals and menus for different age groups but it is important that cooks in every setting have a good basic knowledge of the different dietary needs of different age groups.

Lesson 1: Children and adolescents

Page 1

Good nutrition is the cornerstone of healthy development and depends on providing sufficient energy for a growing body through with a wide variety of foods. A significant proportion of children's daily food consumption is at nursery, school and college. As the meals they are fed at home may not be of high nutritional quality, the food offering in these settings is vital, not only in terms of daily nutrition but also in shaping their food preferences and eating habits later in life. The following pages cover some of key food challenges relating to children and highlight some of the actions that can be taken to address them.

Page 2

Challenge: Children are highly sensitive to flavour and texture therefore tend to prefer bland food such as bread, pizza, pasta and French fries

Action: Always include some of the healthier staple foods, such as good quality bread or pasta, but also serve a wide variety of new foods - with different tastes, textures and colours - so that children can try them and get used to the idea of a varied diet. Avoid including fast food in menus at all costs; if they eat fast food at school they will eat it for the rest of their lives.

Page 3

Challenge: Nearly one in five children in Europe are now overweight or obese and without concerted action by parents and cooks this trend will continue.

Action: Try to cook as much as possible from scratch to avoid the large quantities of sugar and fat (and salt) hidden in many processed foods. Serve age-adapted portion sizes to reduce total calorie intake and to push diners to finish the meal on their plate,

which will mean they are not leaving the vegetables and other ingredients needed for healthy development. Avoid high sugar drinks at all costs and serve water at every meal.

Page 4

Challenge: Most children fall a long way short of the recommended 5 portions of fruit and vegetables each a day.

Action: Include vegetables and fruits at every meal - including breakfast, break time snacks and lunch - but recognise that often it is their texture, colour and unfamiliarity that children find off-putting so it is worth trying to incorporate some of the vegetables in ways, for example as parts of pasta sauces. Many grains and pulses are as high in vitamins and minerals as vegetables, so make the most of them in your meals.

Lesson 2: Adults

Page 1

Healthy eating is important to how productive we work, how we feel and how much we enjoy life. Offering smart food choices for adults can help them reduce the risk of certain conditions such as obesity, heart disease, diabetes, certain cancers and osteoporosis. Therefore people who work in companies or who are cared in public institutions should have access to a healthy, balanced diet. You will find the most important nutritional considerations for adults on the following pages.

Page 2

Challenge: During their working lives, employees can eat up to 12,000 times in their workplace canteen, where the food is often of very poor quality.

Action:

Canteen chefs play a key role in determining the health of employees and the sustainability of the food offering. By helping to shape their food expectations, they can have a very positive influence on employees eating habits, not just in the canteen itself but at home and in their wider lives. Every cook will have their own approach, but one of the secrets to healthy and sustainable food in all catered settings is to make the good choice the easier, tastier choice - the perfect challenge for all ambitious cooks!

Page 3

Challenge: About half of all Europeans are now overweight and nearly a quarter obese, leading to significant rises in diseases such as diabetes, heart disease and cancer.

Action: Work to reduce the number of calories in meals through careful portion control and by cooking as much as possible from scratch, which helps to avoid the large quantities of sugar and fat hidden in many processed foods. Try to avoid high saturated fat or quick release carbohydrate items such as sausages, pasties and pies and increase the proportion of slow release carbohydrates, such as pulses, rice and other whole grains. Include more vegetables in meals and provide a salad bar and fresh fruit options in place of sugary desserts.

Page 4

Challenge: Many meals contain too much saturated fat - which contributes to high levels of 'bad' cholesterol and heart disease - and not enough polyunsaturated fats which can actively help to combat heart disease.

Action: Saturated fats are mostly associated with meat and dairy products, so reducing the proportion of these in meals and replacing them with nuts, seeds, whole grains, fish and plant oils - which are high in polyunsaturated fat - can bring significant health benefits and, except in the case of fish, are always likely to be more sustainable.

Further Information: National food standards for adults

Lesson 3: Elderly people

Page 1

Seniors are one of the most diverse age groups in their eating habits, as they usually prefer more traditional dishes and are less influenced by advertising pressure to eat more standardised processed food, but can revert to eating a narrow range of relatively un-nutritious foodstuffs. As people age, their appetites reduce and their nutritional and health needs change. Older people tend to require fewer calories but more nutrients compared to younger consumers. As the number of older people increases, there will be a growing demand for food that responds to their needs.

Page 2

As people age they have a greater need of Vitamin C, D, folic acid and Vitamin B6 and their ability to absorb Vitamin B12 and calcium declines, so these need increased attention in menu planning. Older people's senses of taste, sight and smell are also diminished and this needs to be compensated for in the type of meals they are offered. In late age, providing sufficient protein also becomes a key issue. The following pages outline these key challenges and suggested actions for this age group.

Page 3

Challenge: The tendency for elderly people's appetite to decrease combined with a reduced sense of sight, taste and smell can lead them to lose interest in food and suffer malnutrition as a result.

Action: Offer colourful, aromatic, well presented dishes to rekindle their interest in food and use herbs and spices (but not more salt or sugar) to ensure the taste remains interesting to their diminished palate.

Page 4

Challenge: Ensuring older people get a full range of key nutrients is vital, particularly as their reduced food intake and preference for easily chewed ingredients can mean they start to miss out on certain foodstuffs such as milk, meat and grains.

Action: Try to ensure that all the key nutrient needs of older people are included in every main meal (older people often only eat one main meal each day). The following are just a few examples of food types that are rich in these nutrients but it is worth investigating the full range of ingredients that contain these nutrients so that you can keep meals varied and interesting.

Vitamin B6: rich sources are grains, potatoes, nuts, meat, fruits and vegetables.

Vitamin B12: rich sources are fish, meat (esp. liver) and dairy (esp. cheese).

Vitamin C: rich sources are fruits (including juices) and vegetable (including potatoes).

Vitamin D: rich sources are fatty fish, liver, cheese, egg yolks and mushrooms. Vitamin D is also made naturally by the body when skin is exposed to the sun.

Calcium: rich sources are dairy products, green leafy vegetables, seeds and nuts.
Folic acid: rich sources are green leafy vegetables, strawberries and beans

Page 5

Challenge: In advanced age, people have an enhanced need for protein, which tends to reduce in older people's diets because of lower overall food intake and the consumption of simple meals containing a narrow range of foodstuffs.

Action: Again, try to ensure that there is a good source of suitable protein in every main meal. These include milk, yogurt, butter, cheese, eggs, meat and fish as well as vegetables such as potatoes, nuts and legumes.

Further Information: National standards for elderly

Chapter 3: Religious food restrictions

Page 1

Catering to the special dietary requirements and restrictions of people with different religious beliefs is vital. Many of these restrictions are very strictly adhered to and people should not be put in a position when dining in any setting where the food offering discriminates against them or forces them to eat a sub-standard hastily put together meal because no suitable options have been planned and prepared for them. When you are designing menus for people with different cultural and religious diets, try to make sure that the food you provide looks as similar as possible to the dishes being served to others, as this will avoid marking them out as 'different'. The following lessons outline some of the basic food requirements and restrictions of some religious groups, but again it is worth exploring their needs and preferences in more detail locally so that you can provide them with the best possible meal options with the ingredients that are available to you.

Lesson 1: Religious groups

Page 1

Christian

About 75% of the European population are Christians, most of them Catholics. While many Christians do not adhere to strict diets, Catholics do not eat meat on Fridays and many members of the wider Christian community will not eat meat on Ash Wednesday or Good Friday.

Page 2

Muslim

In Western Europe, Islam is the second largest religion after Christianity and represents 6% of the total population. In many places, particularly urban areas, Muslims may make up a much larger proportion of the population and may be in the majority in settings such as schools, so it is vital that their needs are fully met, particularly in public sector catering. *Halal* foods are those that are allowed under Islamic dietary guidelines. According to these guidelines gathered from the Qu'ran, Muslim followers must not consume: pork or pork by-products, animals not slaughtered properly or not slaughtered in the name of Allah, blood or blood by products, and alcohol.

Page 3

Buddhist

In Europe, about 0.42 % of the population are practising Buddhists. The diet of Buddhists varies, but many are vegetarians or vegans as they believe their actions should bring no harm to animals and they often do not consume alcohol.

Page 4

Hindu

Hindus make up 0.27% of the European population. Many Hindus do not eat meat, especially beef. Hindus divide food into three categories based on how they enhance or hinder physical and spiritual development:

Tamasic foods are considered heavy, dull and depressive and include meat, heavy cheese, onions, garlic and mushrooms among others. This category also includes old and stale food.

Rajasic foods are hot, spicy and salty and are believed to irritate and stimulate, often in an unhelpful way that leads to agitation.

Sattvic foods are believed to bring clarity and perception and help unfold love and compassion in the consumer and include many fruits, fresh yogurt and leafy greens.

Page 5

Jewish

Jews make up 0.18% of the European population. *Kosher* foods are those that conform to the regulations of kashrut (Jewish dietary law). Although the details of kashrut are extensive, the laws all derive from a few fairly simple, straightforward rules. Certain foods cannot be eaten and certain foods must be separated. Of the animals that may be eaten, birds and mammals must be killed in accordance with Jewish law. All blood must be drained from meat and poultry or broiled out of it before it is eaten. Meat cannot be eaten with dairy. Fish, eggs, fruits, vegetables and grains can be eaten with either meat or dairy. Utensils (including pots and pans and other cooking surfaces) that have come into contact with meat may not be used with dairy, and vice versa. There are a few other rules that are not universal, so it is worth exploring these at a local level.

Page 6

A quick reference guide

Food	Christians	Muslims	Buddhists	Hindus	Jews
Fruit and vegetables	Yes	Yes	Yes	Yes	Yes
Nuts and pulses	Yes	Yes	Yes	Yes	Yes
Cereals and grains	Yes	Yes	Yes	Yes	Yes
Milk	Yes	Yes	Yes	Yes	Not with meat
Cheese	Yes	Yes	Yes	It varies	Not with meat
Butter and ghee	Yes	Yes	No	It varies	Kosher only
Lard	Yes	No	No	No	No

(animal fat)					
Eggs	Yes	Yes	Yes	It varies	No blood spots
Chicken	Yes	Halal only	No	It varies	Kosher only
Mutton/lamb	Yes	Halal only	No	It varies	Kosher only
Beef	Yes	Halal only	No	no	Kosher only
Pork	Yes	No	No	No	No
Fish	Yes	It varies	It varies	Fish with fins and scales only	Fish with fins and scales only
Shellfish	Yes	It varies	No	It varies	No

Chapter 4: Food allergies and intolerances

Page 1

Most people enjoy a wide variety of foods without any adverse reactions but an increasing number suffer food allergies or intolerances. A food allergy involves an adverse immune response to proteins in certain ingredients that can lead to symptoms such as breathing problems, throat tightness, coughing, vomiting, abdominal pain, hives, swelling or a drop in blood pressure. While most food allergies cause relatively mild symptoms, others can be life-threatening. Food allergies affect more than 17 million people in Europe alone and the sharpest rise in food allergies is amongst children and young people. Food intolerance occurs when a person cannot properly digest the food that is eaten or a particular food might irritate the digestive system. Symptoms of food intolerance can include nausea, gas, cramps, abdominal pain, diarrhea and headaches.

Lesson 1: Allergenic food regulations

Page 1

In Europe, new legislation (the EU Food Information for Consumers Regulation 1169/2011) has been introduced that requires food businesses to provide allergy information on food sold unpackaged. Restaurants and catering businesses are required to clearly identify all allergens appearing in dishes.

Page 2

14 food allergens that must always be labelled when used as ingredients are:

Cereals containing gluten such as wheat, rye, barley, oats, spelt or khorasan

Crustaceans such as prawns, crabs, lobster, crayfish

Molluscs such as for example clams, mussels, whelks, oysters, snails and squid

Fish

Milk (including lactose)

Eggs

Peanuts

All other nut and nuts derivatives including almonds, hazelnuts, walnuts, cashews, pecan, Brazil nuts, pistachio nuts, macadamia nuts

Soybeans

Celery (including celeriac)

Mustard

Sesame seeds

Sulphur dioxide

Lupin

Page 3

With industrial food processing, identifying potentially allergenic foods is increasingly difficult due to the inclusion of unexpected auxiliary materials such as lacto-protein or egg in the tiniest amounts - but that can still cause allergic reactions - is increasingly common. Preparing meals from scratch helps to avoid these 'hidden' allergenic ingredients, but it is important to read all ingredient labels carefully.

Lesson 2: Managing the most common food allergies and intolerances

The foods which most commonly cause allergic reactions are gluten, lactose and casein, eggs and peanuts/nuts. The following pages provide guidance on the ingredients to avoid for these allergens.

Page 1

Gluten

Gluten is a protein found in wheat, barley, rye and oats. Common grains such as rice and maize can be eaten, as can more uncommon substitutes such as amaranth and quinoa. There are an increasing number of gluten-free products available. Processed foods that usually have to be avoided include those that have been made from wheat-flour such as bread and pasta, as well as many breakfast cereals.

Page 2

Lactose and casein

Lactose is the main carbohydrate in milk and milk products. Milk products with low lactose content such as hard cheeses and yogurts can often be tolerated, so it is not always necessary to eliminate all dairy products from meals and where possible this should be avoided to prevent a lack of calcium. Lactose-free dairy alternatives are also becoming more and more available.

Casein is a protein commonly found in milk from mammals and can be found in high concentrations in cows' milk and related dairy products such as butter, cheese and yoghurt. Some processed products may also contain traces of casein. Milk from other animals such as sheep and goats can often be tolerated.

Page 3

Eggs

Food containing both egg yolk and egg white (albumen) should be avoided and this includes all eggs (not just chicken eggs). Avoiding egg can be very difficult, particularly as it appears in a wide variety of processed products, including such simple products as pasta and mayonnaise.

Page 4

Nuts

Nut allergies can cause an extremely severe and dangerous allergic reaction, so it is important to provide a meal option that strictly avoids all nut products and those in which traces of nuts may be found. This includes not only unrefined nut oils and marzipan, but the many products that can contain small traces of nuts such as salad dressings and sauces.

Test:

Question 1: Which of the following food trends are strongly linked to sustainability? Select ALL that apply.

- Fresh
- Convenience
- Locally sourced
- Nose-to-tail/root-to-stalk cooking
- Vegan
- Gluten free

Answer: Fresh, Locally sourced and seasonal, Nose-to-tail/root-to-stalk cooking, Vegan. Well done! In current food trends environmental sustainability is on the top of the list, followed by local sourcing, health-nutrition and pure, additive- and allergen-free cuisine.

Question 2: True or false? Chefs have to take into account, that children have decreasing sensory perception of food taste.

- True
- False

Answer: Both answers are ok: It's true, children like to eat, what they are used to. If children only get „pizza, pasta, french fries“ they develop an „uniform taste“. Children who grew up eating healthy foods at home and at school or kindergarden are likely to continue positive habits in the future. In order to improve their taste perception, chefs should serve children a wide range of varieties of foods and choose foods with differing tastes, textures and colours.

Question 3: Fill in the blank: Lactose is the main carbohydrate in _____ .

- Fruits
- Milk
- Cereals

Answer: Milk. Well done! People with lactose intolerance should avoid milk and dairy products. Milk products with low lactose content such as hard cheeses and yogurts are normally better tolerated.

Question 4: Which one of the following is NOT a possible ingredient for Muslims?

- Vegetable
- Milk
- Nuts
- Pulses
- Fruit
- Eggs
- Cereals
- Pork

Answer: Well done! Many people follow diets related to their culture or religious belief. Public catering and gastronomy must assess the dietary needs of their population in order to provide a popular and viable service. Most of our food stuff (like cereals,

vegetables, fruits, nuts, pulses etc.) is possible for all cultural and religious groups. Try to select foods that can be easily modified for special diets.

Question 5: True or false? Chefs are in the position to positively influence the eating habits of their customers.

True

False

Answer: True. Well done! Working people for example eat up to 12 000 times in the canteen, pupils eat up to 5 000 times lunch or breakfast at school. In making food a little bit healthier and more sustainable chefs can influence their eating habits a lot! Make the better choice the easier choice for your customers!

Which of the following are NOT one of the 14 food allergens that must always be labeled in restaurants or public catering (according to the EU Food Information for Consumers Regulation 1169/2011) (2 answers)

Wheat

Soy

Corn

Eggs

Sesame seeds

Honey

Answer: Corn, Honey: Well done! Food allergies and intolerance is a growing public health concern. Therefore it is important to choose food properly, read labels and cook with ingredients you can control.

Unit 5: Balancing health, sustainability and cost

In this unit I will learn about:

1. The key components of different foodstuffs and recommended daily servings.
2. How food is processed, the role of additives and which are better to avoid.
3. How healthy and sustainable meals can be produced cost-effectively.

Introduction to the topic

Where food is concerned, there is a very strong link between the health and wellbeing of people and the planet, so if something is not good for the planet it is probably not good for people either. The top priority for any cook must be to serve great tasting meals, but by using recipes that include healthy and sustainable ingredients cooks can also ensure that the meals they produce bring a wealth of wider social, economic and environmental benefits. As well as including the right proportions of different food types and thinking about how they can reduce any potentially harmful additives, cooks should also think about the impact their meals may have on people and the planet at every stage in the food chain, from how and where it is produced to how it is processed and transported.

Chapter 1: A well-balanced plate

Lesson 1: Balancing health and sustainability in meals

Page 1

When planning well-balanced, healthy and sustainable meals it is important to know which foodstuffs provide what in terms of nutrition and also what their environmental impact is. [Food pyramids](#) are a useful guide to what proportion of different food types our diet should contain. The [Eatwell plate](#), which shows the ideal overall proportions of different food stuffs for each plated meal, is another really useful tool that is now being used across Europe.

Page 2

While food pyramids and the Eatwell plate help to illustrate what is needed for a healthy nutritious diet, the [double sustainable pyramid](#) introduces the additional impact different foodstuffs have on the environment and clearly makes the link between healthy people and a healthy planet. Use it in Lesson 2 as you explore the main food groups.

Lesson 2: The main food groups from a health and sustainability perspective

Page 1

Foods rich in carbohydrates

This group should make up the largest proportion of our daily food intake as they provide us with energy. Major sources of carbohydrate are cereals, potatoes and rice. Natural and processed sugars are also a major source of carbohydrate but, because they need little digestion, can lead to spikes in blood sugar levels which can lead to fatigue and contribute to the onset of type II diabetes. It is much healthier to eat unprocessed slow-release carbohydrates, particularly those made from whole grains, seeds and pulses, which even out the release of energy over time and have a higher vitamin, mineral and fibre content. However, any food that is a source of carbohydrate - including grains, seeds and pulses - but that is grown in an industrial mono-culture (i.e. on a vast scale where only one crop is grown and with the use of pesticides and herbicides) will be bad for the environment as it leads to degradation of soil, water and biodiversity. So, wherever possible, it is worth considering organic and low pesticide input products that come from sustainably managed farms.

[Recommended servings per day](#)

Page 2

Foods rich in vitamins and minerals

The human body needs a huge variety of vitamins and minerals to function healthily and effectively and, though almost all food types - including meat, dairy, eggs and grains - contain a wide range of vitamins and minerals, the best source is fresh fruit and vegetables, including both leafy greens and root vegetables. There are so many different vitamins and minerals and so many different sources for each that it is really worth getting a wall chart or quick reference guide to help you with your daily cooking, but one simple rule of thumb is to try to incorporate five different colour fruit and vegetables each day as each colour is connected with different vitamin and mineral groups. Vitamins are often lost during cooking, so try to include as many raw fruits and vegetables in your menus as possible. Again, how these foods are produced, processed and transported is

vital. Many fruit and vegetables are sprayed repeatedly with pesticides and processing and transport often significantly reduces their vitamin and mineral content, so it is worth looking at fresh, seasonal, local and organic fruit and veg if you want a great tasting, healthy and sustainable product.

[Recommended servings per day](#)

Page 3

Foods rich in protein - milk and dairy products

Milk and dairy products are rich in protein (casein, whey), calcium (more animal protein in diet reduces its absorption) and fat (if not produced from skimmed milk). They contribute riboflavin, vitamin B12 (microwave heating inactivates it), magnesium, potassium and, when fortified, vitamins A and D. The more processed dairy products are, the fewer nutrients they contain. Intensive dairy production is very unsustainable and milk from industrial production contains less omega 3, carotenoids and vitamin E than organic milk. You can find the composition of different types of milk [here](#).

[Recommended servings per day](#)

Page 4

Foods rich in protein - meat, poultry, fish and eggs

Meat, poultry, fish and eggs are rich in protein, iron, zinc, magnesium, potassium and B vitamins. To reduce the quantity of saturated fat, it is important to choose lean cuts of meat. Try to include a variety of meats, both [red and white](#), and fish at least one or two times per week. Avoid processed meat products wherever possible as they often contain high levels of salt, additives and saturated fat. Intensively reared meat is at the top of both the health and sustainability food pyramids as it has the greatest negative impact both on human health and the environment.

[Recommended servings per day](#)

Page 5

Foods rich in protein – legumes and nuts

Legumes and nuts contain foliate, thiamin, vitamin E, iron, magnesium, potassium and zinc. They contain virtually no saturated fat, are very rich in fibre and extremely nutritious. They are the ideal choice for vegans. Combining legumes and nuts with cereals and vegetables can make the perfect meal. Nuts are high in carbohydrate and unsaturated fat so should be used sparingly and instead of rather than with other foods that are high in calories and fat.

[Recommended servings per day](#)

Page 6

Foods rich in essential fats and oils

Fats and oils contribute vitamin E and essential fatty acids and are vital in small amounts for good health. Good choices are foods high in unsaturated fats and particularly omega 3 fatty acids, which include nuts and oily fish such as salmon, herring and mackerel. Saturated fats (and trans fats which are an artificially manufactured fat that is now being banned in many countries) should be kept to a minimum because they increase 'bad' cholesterol which causes cardiovascular diseases.

[Recommended servings per day](#)

Page 7

Foods high in saturated fat, sugar and salt

Many processed foods are high in fat, sugar and salt and should be avoided wherever possible as they have little nutritional value and contribute to diet-related diseases including heart disease, type II diabetes and some cancers. There are no recommended daily servings for these food types.

Chapter 2: Food processing and its effect on nutrients

Lesson 1: Food processing

Page 1

Processing preserves food by eliminating micro-organism and therefore extends a product's shelf life. There is a wide [spectrum of processed foods](#) and almost all food is processed in some way before it is eaten. During processing, the composition of food is changed and, except where processing involves fortification of food with vitamins and minerals, its nutritional value is usually reduced. Much food processing involves the addition of unhealthy amounts of salt, sugar and/or fat, particularly in the production of ready meals. Food processing can also remove or destroy water-soluble vitamins and minerals, such as vitamin C.

Page 2

As well as being used from their fresh state, many fruit and vegetables are also available in a variety of preserved forms, including dried, canned and frozen:

Drying: to dry fruit and vegetables, sulphites are added (except in organic products) as a preservative. Drying can reduce vitamin C, though the process can also concentrate nutrients and fibre, so dried fruit and vegetables can in some ways be healthier weight for weight than fresh.

Canning: starts with blanching step which inactivates enzymes. Canned produce often loses some of its flavour and tends to be saturated so it loses crispness and natural texture. The metal in cans can interact with contents, such as tomatoes, to change their flavour and also neutralises certain vitamins.

Quick freezing: preserves nutrients to a great extent, especially when fruit and vegetables are frozen within a few hours of harvest (fresh-frozen). Freezing breaks down a plant's cell membranes, however, so causes vegetables with a weak cellulose structure (such a green leafy vegetables) to become limp, mushy and unappetizing, though less so those with a strong cellulose structure such as peas, beans and pulses.

Page 3

Milk

Pasteurizing, which involves heating a product to 63 – 75 centigrade, is a relatively mild processing method used for milk, juices, vegetables and fruits. It destroys disease-causing microorganisms and inactivates enzymes. Some vitamin levels are reduced by pasteurizing, particularly thiamin and vitamin C. Sterilising, which involves heating to about 100 centigrade, is more aggressive. It destroys all microorganisms but also nearly all vitamins.

Page 4

Meat

Meat products are one the most processed food groups and include physical (cutting, mixing, filling) as well as chemical (salting/curing) processing. Salt absorbs water, so salting not only increases levels of salt consumed but also deprives meat of moisture,

which affects its taste and texture. Nitrite salt curing is used to change the colour of meat, but exposure to high temperatures (especially frying) can produce nitrosamines, which are a suspected carcinogen. Read more about [nitrite](#). Residues of benzopyrene, which are used in smoked products, are also believed to be carcinogenic in high doses.

Page 5

Losses of nutrients from field to fork

At every stage in the food chain nutrients can be lost and the more links in the chain and the more significant the processing, the more nutrient loss is likely to occur. For example: the amount of vitamin C in a crop is reduced by the use of nitrogen fertilisers; water-soluble vitamins (B-group and C) are more unstable and likely to be lost than fat-soluble vitamins (K, A, D and E) during food processing, storage and cooking; and fruit and vegetables that need to be transported long distances tend to be picked before they have properly matured so that they are not over-ripe when they reach their destination but this also means they have had less time to absorb useful minerals. So if you want food with the most nutrients (and the best taste!) choose fresh and seasonal, locally and organically produced food.

Chapter 3: Additives

Lesson 1: What are additives?

Page 1

An additive is any substance added to food. In the form of preservatives, 'natural' additives - such as smoke, salt and more recently vinegar - were used for centuries before the invention of refrigeration to prevent food from going bad. Modern additives include a large number of artificial chemical preservatives as well as a vast array of other chemicals used to change the colour, texture and taste of food. Because food products manufactured on a large scale for often distant markets have to be stored, their additive content is often high, particularly compared to locally-sourced fresh produce which require few if any additives. From a health and sustainability perspective, chemical additives can represent both a health and environmental risk.

Page 2

There are a variety of 'classes' of food additive, which include:

[Antioxidants](#) - stop food becoming rancid or changing colour by reducing the chance of fats combining with oxygen.

[Colours](#) - both natural and artificial are used extensively to make food appear more attractive to the consumer.

[Emulsifiers, stabilisers, gelling agents and thickeners](#) - help to mix or thicken ingredients and to prevent different ingredients from separating.

[Flavour enhancers](#) - are used to bring out the flavours in foods – including sweetness, sourness, saltiness, bitterness, and umami.

[Preservatives](#) - destroy microbes that cause food to deteriorate or go bad and therefore enable it to remain edible for longer.

[Sweeteners](#) - intense sweeteners are many times sweeter than sugar, whereas bulk sweeteners have a similar sweetness to sugar weight for weight.

Lesson 2: Some additives to avoid

Page 1

While the European Food Safety Authority (EFSA) has decided that small amounts are safe, children with hyperactivity should avoid certain food colourings. Foods containing the following colours must have a label saying: '*May have an adverse effect on activity and attention in children*': sunset yellow (E110), quinoline yellow (E104), carmoisine (E122), allura red (E129), tartrazine (E102) and ponceau 4R (E 124).

Page 2

Nitrite salts can react with certain amines in food to produce nitrosamines, many of which are known carcinogens. Food manufacturers must show that nitrosamines will not form in harmful amounts or will be prevented from forming in their products.

Other additives which many people try to avoid include the flavouring enhancer monosodium glutamate (MSG), artificial sweeteners, antioxidants (BHA, BHT), emulsifiers, stabilizers, phosphorus acid and phosphates. Extensive information can be found on the internet on the potentially harmful effects of these and many other additives, but it is important to remember that all additives regularly used in Europe have been deemed fit for consumption by public health authorities and it is up to the individual to decide if they believe some of the claims made.

Page 3

One of the biggest risks to health is not technically an additive, but has been 'added' upstream in the production process and that is pesticides and herbicides. The majority of fruit and vegetables (except those produced organically) are subject to repeated spraying of pesticides and herbicides. As with additives, those currently permitted under the EU's legal regulatory framework are considered safe, but over recent decades a number have subsequently been outlawed due to concerns about potentially harmful impacts on humans and/or environmental health. One area of special concern but that remains relatively poorly investigated by health agencies relates to what is known as the 'cocktail effect', through which different chemical treatments may interact to create a more toxic effect in the consumer.

Chapter 4:

Lesson 1: Busting the cost myth

Page 1

With many restaurants and caterers constantly under financial pressure, the idea that it is possible to produce great tasting meals that are not only better for people and the planet but that also increase meal uptake and profits can be hard to swallow. Yet more and more places are achieving exactly that; and the cooks involved have become the champions of a new food revolution. In fact, with the number of consumers who want delicious but affordable healthy, sustainable and ethical food growing every year and many pioneering cooks and catering establishments already fulfilling their needs, places that don't deliver may soon lose out to those that do.

Page 2

One of the most important realisations for cooks that are driving this change has been that healthy and sustainable high quality meals do not have to cost more, even when they contain local, organic and fair-trade ingredients. It is, in fact, one of the great myths

of modern food culture that industrial mass-produced food is inherently cheaper. Fresh, local produce is often much cheaper, when in season, than that produced internationally and sold through wholesalers and multiple retailers. Cooks who know how to use cheaper cuts of meat and a larger proportion of the various fruit and vegetables they buy, as well as those that know how to preserve and reuse left-overs, can reduce meal costs considerably, while bringing more interest to their menus. And using less meat and replacing it with alternatives such as nuts, pulses, seeds and other meat substitutes - or, as many cooks and caterers are now doing, introducing meat free days - not only significantly reduces ingredient cost (meat being the highest cost element in most recipes) but also helps to create exciting, varied and innovative meals.

Lesson 2: Believing in change, planning for real

Page 1

As well as accepting that there are low cost ways to provide healthy, sustainable and ethical meals, cooks and catering businesses also need to believe in their power as the agents of positive change and recognise the true breadth and depth of their impact in promoting sustainable diets, not just on people's health but on a wide range of local and global environmental issues.

Page 2

According to Food and Agriculture Organization of the United Nations:

“Sustainable diets can address the consumption of foods with lower water and carbon footprints and promote the use of food biodiversity, including traditional and local foods, with their many nutritionally rich species and varieties. The sustainable diets approach will contribute to capturing efficiencies through the ecosystem approach throughout the food chain. Sustainable diets can also contribute to the transition to nutrition-sensitive and climate-smart agriculture and nutrition-driven food systems.”

Page 3

The vital next step, of course, once you know that it is possible to produce great healthy, sustainable and ethical meals at low cost, is to think about and carefully plan how you are going to do it. Guided by the old adage 'A journey of a thousand miles begins with the first step', it is critical for cooks not to let new found enthusiasm get the better of them. Trying to do too much too quickly is not only likely to overwhelm the cooks and catering businesses concerned, but you may also find you leave your customers behind, who also need to go on a gradual journey in discovering and coming to appreciate the joys of really wholesome sustainable food. In the next unit, we will look at how to plan changes in this incremental way - step by step.

Test questions

Question 1: What is the difference between Food Pyramid and Double Sustainable Pyramid?

Answer: Food Pyramid shows recommended intake of food groups for people. Double Sustainable Pyramid shows how people's health and planet health are connected. It is composed of two pyramids, where one is Food Pyramid that shows recommended intake of food groups for people and the other Environmental pyramid shows the impact of growing and processing these food groups on the environment.

Answer: Double Sustainable Pyramid is composed of two pyramids, where one is Food Pyramid that shows recommended intake of food groups for people and other shows impact on food groups on the environment. Food groups which are healthy for people in bigger amounts are not good for environment.

Answer: Double Sustainable Pyramid shows that food groups at the top of Environmental pyramid have high impact on the environment, that is good and sustainable.

Question 2: Organic milk contains more nutrients than milk from intensive production. It contains more:

Answer: omega 3 fatty acids, carotenoids, iron

Answer: omega 3 fatty acids, carotenoids, vitamin E

Answer: magnesium, iron, carotenoids, vitamin E

Question 3: What is recommended serving for foods high in fat, sugar, salt and alcohol?

Answer: maximum two servings per day, not every day

Answer: more than two servings per day if we drink a lot and do sports

Answer: there are no recommended servings, because these foods are not essential and contain mostly empty calories

Question 4: Diets with less meat and animal products are more sustainable.

Choose one substitute for meat, which is protein rich, non-fat and cheap:

Answer: cheese

Answer: legumes

Answer: mushrooms

Question 5: Which one claim is not characteristic of fair and equitable food supply chain?

Answer: farmers, ranchers, fishers are treated as strategic partners, with rights and responsibilities

Answer: relationships between strategic partners are framed in win - win terms

Answer: welfare of all strategic partners is important: fair profit margins and fair wages for partners, business agreements of appropriate duration

Answer: location and coordination of operations is on national or international scale

Answer: values, vision, information and decision - making are shared among the strategic partners

Answer: welfare of all strategic partners is important: fair profit margins and fair wages for partners and the fairest share for decision makers (who should never be asked about them, for not spoiling the atmosphere).

Unit 6: Menu planning for step by step change

In this unit I will learn about:

1. To analyse menu plans and assess their nutritional, ecological and sensory quality and make suggestions for improvement of quality and costs
2. To assess quality differences between organic and non-organic ingredients regarding the nutritional content, use and quality
3. To add alternative ingredients, different varieties/cultivars in order to preserve them

Introduction into the topic:

Menu planning plays a prominent role in generating sustainability. The menu plan reflects the culinary philosophy of the kitchen/institution and determines basically and essentially all other kitchen processes, like purchasing, preparation, staff assignment, keeping the operation economically sustainable, etc. Menu planning is the practical application of a strategy decision towards more sustainability.

Chapter 1: Taking a strategic approach

Page 1

Making your food offering and your catering operation more sustainable has become considerably easier in recent years. The rapid growth in demand for healthy and sustainable food means you will be catering to an increasingly interested and well-informed customer base and that there are more producers and processors able to supply the kind of food you want to serve. There are also now a huge variety of businesses offering products and services to help make your kitchen and your catering operation more sustainable and efficient. Every kitchen is different, of course, and the strategies that work in one setting may not work as well in another, so it is important to develop an approach that works you, your colleagues and your business.

Lesson 1: 3 steps to an effective strategy

Page 1

Step 1: Think about what food issues inspire and matter to you personally. Think about which might matter most to your customers or, even better, ask them. Then try to list them in order of priority, as you may not be able to work on all of them at once. The list of potential issues is almost endless, but here are a few to get you started:

- Serving delicious food
- Serving high quality food
- Serving safe food
- Serving healthy food
- Protecting wildlife and nature
- Minimising your contribution to climate change
- Maximising animal welfare
- Supporting fair trade in the developing world.
- Supporting local food producers.

Page 2

Step 2: Identify allies and engage with everyone.

You will not make the move to sustainability alone. People in management, planning, budgeting, operations, purchasing, cooking and service can all either help or hinder your efforts, so be sure to talk to them early on and involve them in the process. Tell them your ideas and listen to theirs. But before you do, think carefully about their interests and priorities and how your ideas around sustainability could help to achieve them, for example by bringing in new customers, reducing costs or making processes more efficient. Also, think about who your key allies could be. Identify the people with the skills, interest and influence you need and get them on board first.

Page 3

Step 3: Set a sustainability goal and priorities for your kitchen

Work with all your colleagues to agree what your joint sustainability priorities are. Try to create a 'vision' statement that captures clearly and concisely what your overall goal is. Don't worry if it does not seem achievable you at this stage; if it is really inspiring and ambitious it should feel unachievable, e.g. 'The most sustainable restaurant in Foodland' or a 'A zero carbon kitchen'. Then discuss, agree and write down your key priorities in working towards that goal, e.g. 'Reducing our carbon footprint by 25% this year', 'Sourcing 50% of our food within 30 miles' or 'Only using free-range eggs'. Make absolutely sure these ARE achievable, as it is vital that you are successful and use to motivation of success to keep improving, step by step.

Lesson 2: Using sustainability principles to plan your menu

Page 1

Principle 1: Fresh

Actions: reduce/avoid frozen foods and use fresh produce instead; avoid processed foods like readymade sauces, soups or stocks, processed meat, UHT-milk etc.; and avoid foods and drinks containing artificial sweeteners, flavour enhancers, colours and preservatives.

Page 2

Principle 2: Local

Actions: find out what food is produced in your locality, region and country and source as much as you can from as near as possible. This may involve changing your menus and substituting locally available ingredients for those previously sourced from international producers through wholesalers and retailers.

Page 3

Principle 3: Seasonal

Actions: plan your menus around produce that will be in season locally, but avoid vegetables from energy intensive local greenhouse production which extends the local 'season' but is, in many instances, far less sustainable than vegetables produced in season elsewhere and then imported.

Page 4

Principle 4: Less meat

Actions: serve fewer meat dishes and introduce meat free days; provide smaller cuts or slices of meat but larger portions of carbohydrate and vegetables; and use more peas, beans, lentils, nuts and other vegetable proteins as meat substitutes.

Page 5

Principle 5: Sustainably produced

Actions: include organic ingredients in your menus - it is worth doing a price comparison for your area as many organic products may be nearly as cheap as non-organic ones, including staples such as rice, pasture fed meat such as lamb, milk and especially locally sourced seasonal vegetables. Use sustainably sourced fish.

Page 6

Principle 6: Fair/ethical

Actions: try to use Fairtrade products wherever possible, particularly for low-volume high value products such as tea and coffee where the price difference from non-Fairtrade is relatively small per serving; source from local producers - direct where possible - to help ensure they get a fair price for their products; and try to use high animal welfare products.

Page 7

Principle 6: Variety

Actions: try to use as wide a range of food varieties as possible, including speciality foods, different varieties/cultivars of fruit and vegetable and meat from rare breed animals; try to include a wide variety of tastes, colours and textures and really encourage your customers to try new dishes; and try including recipes from a wide range of food cultures in your menus.

Page 8

Principle 7: Meet their needs

Actions: ensure portion sizes are appropriate; provide dishes that meet special dietary cultural, religious or food intolerance needs as well as vegetarian/vegan options; always know and meet food and drink guidelines and regulations.

Page 9

Principle 8: Reduce waste

Actions: observe costumers eating patterns to see if there is anything consistently uneaten so that you can adapt these elements of dishes by using more popular alternatives or reducing/removing them altogether; enable customers to choose a portion size that suits them; use your leftovers and make sure that any food that is still fit to eat does get eaten.

Lesson 3: Using health principles to plan your menu

Page 1

Many of the sustainability principles and suggested actions mentioned already will also bring health benefits, but there are a few other health-specific ones worth considering which you will find on the following pages.

Page 2

Principle 1: Unadulterated

Actions: use as much fresh and raw produce and as few highly processed products as possible; check out the list of ingredients in processed products and avoid those with lots

of additives; and use 'lighter' cooking methods such as blanching, boiling, grilling and baking rather than roasting, frying or deep-frying.

Page 3

Principle 2: Better carbs

Actions: use unrefined carbohydrates such as wholemeal flour and brown sugar and aim for 50% wholegrain across your menu; also try to use as wide a variety of grains, seeds, pulses and tubers as possible including spelt flour, buckwheat, oats, barley, rye, triticale, millet, corn, rice, polenta, amaranth, quinoa, beans, lentils, potatoes, sweet potatoes etc.

Page 4

Principle 3: More veg

Actions: try to include at least three vegetables in every meal and to increase the range and proportion of vegetables in existing recipes for example by substituting some of the meat content with pulses or by putting a greater quantity of vegetables in soups; offer salads or vegetable sticks as a starter or side dish; and try offering a salad as a main course but with protein and carbohydrate components such as eggs, cheese, legumes, tofu, fish or meat.

Page 5

Principle 4: Less but better fat

Actions: try to reduce the amount of saturated fat - and completely avoid hydrogenated and trans fats - in meals, for example by choosing lean cuts of meat; using milk or yoghurt instead of cream; binding soups and sauces with potato or cereal flakes instead of butter or roux; replacing potatoes croquets or French fries with baked potatoes; and using yeast dough, biscuit dough or filo pastry instead of fat-rich Danish pastry or puff-pastry for desserts. Try to use good oils instead of bad fats wherever possible, for example by using high quality cold pressed oils instead of ready-made dressings and by including oily fish such as anchovies, sardines, mackerel and salmon.

Page 6

Principle 5: Menu cycle balance

Actions: while restaurants will need to provide a variety of meal options each day, public sector caterers and workplace canteens can use their weekly menu cycle to ensure a more healthy diet for customers through the menu rotation. For maximum health benefits, the following is a useful guide for an 'ideal' 5-day menu cycle to work towards: 1 meat day, 1 day with only a small amount of meat, 2 days of vegetarian dishes and 1 day with a sustainable fish dish.

Glossary of terms

Essential amino acids: amino acids are needed for the human body to produce key proteins for building and repairing tissues and organs. Failure to obtain enough of even one of the 10 essential amino acids can have negative health impacts and, since they cannot be stored in the body, should be included regularly in meals.

Phytochemicals: are plant chemicals found in fruit and vegetables that can help protect against disease. There are more than 1,000 known phytochemicals, such as lycopene in tomatoes, isoflavones in soy and flavanoids in fruits.

Test:

Question 1: Which of the following aspects are important for planning a sustainable meal? Select ALL that apply.

1. Reduce the share of meat.
2. Provide frozen vegetables instead of fresh.
3. Avoid vegetables from energy intensive greenhouse production.
4. Use a wide range of food varieties.
5. Avoid organic food.

Answer: Yes, Well done! 1, 3 and 4 is correct.

True or false? Using ready made sauces risks unwanted additives in your dishes.

True

False

Answer: True: Well done! Industrial products often include additives like sweeteners, stabilizers or flavour enhancers. Check out the list of ingredients in convenience products!

True or false? In order to preserve the wealth of domesticated biodiversity, cooks should not use and people should not eat different varieties and cultivars!

True

False

Answer: False: Well done! Only, if cooks and customers buy a wide variety of foodstuff, farmers will cultivate it.

Which of the following are possibilities to increase the share of fresh vegetable and fruit? Select ALL that apply.

1. increase the proportion of vegetables in traditional dishes
2. offer salads or vegetable sticks as a starter
3. offer a seasonal salad bar
4. never serve fruit as a dessert

Answer: 1,2 and 3 are correct. Well done!

True or false? Using local food doesn't help local farmers. They would earn more money, if they could sell their produce to big supermarkets.

True

False

Answer: False: Well done! Spending money on local food helps support your local economy. Additionally, the food is fresher and is less likely to lose nutrients during shipping and storage. Localized gastronomy gives value-added to consumers, consumers clearly value authenticity.

Module 3: Procurement

Unit 7: Identifying sustainable food

To introduce key sustainability words/phrases in a cooking context and review the definitions and labels relating to ethical, fair and sustainable food across all main food groups – from meat, fish and dairy to cereals, vegetables and fruit.

Unit 8: Sourcing sustainable food

The help learners understand the trade structures for fresh, seasonal, local and sustainable produce and how to source them direct from individual producers, producer cooperatives, retailers or wholesalers depending on quantities required and local circumstances.

Unit 9: Keeping your costs down

To help learners' understand how to plan weekly menus and menu cycles to keep down costs by reducing high cost ingredients, substituting lower cost and alternative ingredients such as seasonal produce and less common cuts of meat and by reducing waste.

After finishing this module you will have learnt:

- What labels and tools can be used to identify fresh, fair, organic, regional, seasonal food and sustainable fish.
- How the sustainable food trade works and where to find the right partners for buying sustainable food.
- Different strategies on how to keep the costs in balance while using step by step more and more sustainable food.

Unit 7: How to identify sustainable food

In this unit you will learn:

- What is the basic idea of a food label / logo
- What labels exist on the market
- Where to find more information's about food labels

Page 1

Cooks who want to include more sustainable food in their menus need a good basic knowledge of the special logos and labels put on food packaging to identify more sustainable products. Some of these logos are international, others national and some even regional or local. Each logo will be related to specific rules and regulations, usually enforced by a certification body which makes sure these rules are being met, so that customers can trust that the product is what it says it is.

Chapter 1: Fresh, seasonal and regional food

Page 1

Unfortunately, there is not a set of criteria or logo through which you can identify fresh, regional or seasonal products in general, but there are a variety of separate tools which can be useful. Those covered in the following pages include: value tables for fresh food and grading for convenience products; local and regional food; and EU logos on geographical indications for food and traditional specialties.

Lesson 1: Fresh food

Page 1

The less food is processed the more nutritional value it has. Researchers at the University of Giessen have developed a so called “value table” for food, which shows which food should be used more frequently and which less so within a particular food group. Here are two examples, for fruit and vegetable and for grains, but you can also look at the full table [here](#).

Value steps	1/2 - Highly recommended	3 - Less recommended	4 - Not recommended
Degree of processing	No / low (1) or moderately (2) processed food	Highly processed food	Exaggerated processed
Vegetable/fruit	Fresh fruit and vegetables. Heated fruit and vegetables. Frozen fruit and vegetables.	Canned fruit and vegetables	Frozen processed fruit and vegetables (including those containing vitamin and mineral supplements)
Grain	Sprouted grains. Wholemeal. Freshly ground cereals. Whole grain foods. Whole grains.	Non-whole-grain products (such as white bread, pasta and rice).	Cereal starch (for example, corn starch). Dietary fibre supplements (such as bran).

Source: [Vollwerternährung nach Körber, Mändler, Leitzmann 2004](#), page 190, recalled in 6/2014

Page 2

Grading for convenience products

Convenience Products (CP) have a higher degree of processing than raw ingredients, either through human or mechanical pre-preparation or preservation. Products are differentiated or graded from 0 = “raw material” to 5 = “ready to eat”. If you have to use convenience products, try to use as many as you can from grade 0 to grade 2.

Convenience-grade	Degree of processing	Example
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0 = Raw ingredient	0 %	Fresh fruit and vegetables in natural form.
1 = Kitchen ready	15 %	Canned or frozen fruit and vegetables without additives.
2 = Ready for cooking	30 %	Vegetables with a sauce or spices; frozen French fries.
3 = Ready mixed	50 %	Instant vegetable soup out of a packet.
4 = Ready to reheat	85 %	Frozen vegetable platter with oil and additives.
5 = Ready to eat	100 %	Ready-made potato salad out of a tub.

Source: Qualitätsstandards in der Schulverpflegung, DGE 2009)

Lesson 2: Local and regional food

Page 1

There is no standard definition of local or regional food but, in general, food produced close to where it is eaten will be fresher, tastier and more nutritious; will have a carbon footprint because of reduced food miles (as long as it is in season and not produced in a heated greenhouse); and will have a more positive impact on the local food economy. Some people say local food is from 'the region' (e.g. county, state, province) while others may define it as being produced within a 50 km radius of where it is eaten. If you want to buy local or regional, the best way is to buy direct from a local producer or from a wholesaler who specialises in local/regional food and who can tell you exactly where each of their products come from. Most wholesalers source their products through standard food supply chains which means they could come from anywhere in the world.

Page 2

EU logo for geographical indications and traditional specialties

Three [EU schemes](#) - known as PDO (protected designation of origin), PGI (protected geographical indication) and TSG (traditional specialty guaranteed) - promote and protect the names, quality and/or origin of agricultural products and foodstuffs and help consumers by giving them information on specific characters of products:

Protected Designation of Origin - PDO: covers agricultural products and foodstuffs which are produced, processed and prepared in a given geographical area using a particular and recognised method.

Protected Geographical Indication - PGI: covers agricultural products and foodstuffs closely linked to a particular geographical area. At least one of the stages of production, processing or preparation takes place in the area.

Traditional Speciality Guaranteed - TSG: identifies the traditional character of a particular product - either in its composition or means of production - which is reflected in its status as a food 'speciality'.

Products carrying the PDO, the PGI or the TSG logo are listed in the [DOOR database](#) ("Database of Origin and Registration") of the European Commission.

Chapter 2: Organic and fair trade food and MSC fish

Page 1

Organic products can be identified by an EU-wide logo that is defined by EU regulations and certified in each country by government licensed bodies, which ensure that all organic products meet the standard. Fair trade and sustainable fish products are also governed by either international, EU or country-specific standards with related logos - though again may be certified by private licensed bodies.

Lesson 1 European organic and fair trade certification

Page 1

If used on a product, the EU organic logo indicates that the product fully conforms with the regulations for organic food and farming by the European Union. For processed products it means that at least 95% of the ingredients are certified organic. Alongside the EU logo, you may find a logo relating to the certification body in your country, of which there may be a few. Some in-country certifiers may apply organic standards 'above' the EU requirement so it is worth investigating these if you want to buy the 'best' organic products. To get a better understanding of the basic principles of organic farming try this [hyperlink](#), but there is a brief summary on the next page.

Page 2

Organic farming recognizes the direct connection between our health and how the food we eat is produced. Taking its name from the organic matter that farmers use as an alternative to synthetic fertilizers, organic farmers take a holistic, principled approach that respects and harnesses the power of natural processes to build positive health across the ecology of the farm. Organic farmers develop fertile soil by rotating crops and using compost, manure and clover and place a strong emphasis on the protection of wildlife and the environment. Organic farming methods offer the best practical model for addressing climate-friendly food production, as it is less dependent on oil-based fertilizers and pesticides, confers resilience in the face of climatic extremes and stores higher levels of carbon in the soil.

Page 3

In organic farming:

- Artificial chemical fertilisers are prohibited - instead organic farmers develop a healthy, fertile soil by growing and rotating a mixture of crops, adding organic matter such as compost or manure and using clover to fix nitrogen from the atmosphere.
- Pesticides are severely restricted - instead organic farmers develop nutrient-rich soil to grow strong, healthy crops and encourage wildlife to help control pests and disease naturally.
- High animal welfare is at the heart of the system and a truly free-range life for farm animals is guaranteed.
- A diversity of crops and animals are raised on the farm and rotated around the farm over several seasons, including fallow periods. This mixed farming approach helps break cycles of pests and disease and builds fertility in the soil.

- The routine use of drugs, antibiotics and wormers is banned - instead the farmer will use preventative methods like moving animals to fresh pasture and keeping smaller herd and flock sizes.
- Genetically modified (GM) crops and ingredients are banned altogether.

Page 4

Fair trade

By buying products that carry the Fairtrade Mark, consumers can be assured that farmers and farm workers in poorer countries are getting a better deal: receiving a fair and stable price for their products that covers their costs of production; benefiting from longer-term trading relationships; and receiving the Fairtrade premium to invest in local schools and health clinics, for example.

Page 5

In 2009, the main international networks for fair trade published a charter with the following definition:

“Fair trade is a trading partnership, based on dialogue, transparency and respect that seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers - especially in the South. Fair trade organisations, backed by consumers, are engaged actively in supporting producers, awareness raising and in campaigning for changes in the rules and practice of conventional international trade.”

Fair Trade Products are produced and traded in accordance with these principles - wherever possible verified by credible, independent assurance systems.

Page 6

The principles of fair trade are based on the practical and shared experience of fair trade organisations over many years and reflect the diversity of fair trade relationships. The most important objectives are:

- market access for marginalised producers
- sustainable and equitable trading relationships
- capacity building and empowerment
- consumer awareness raising and advocacy

For more detailed information follow this [link](#).

Page 7

Since Fairtrade’s beginnings in the 1980s and the launch of the current Fairtrade Mark (logo) in 2002, Fairtrade has become the most widely-recognised ethical label in the world. Estimated retail sales of Fairtrade products in 2011 in the UK reached £1.32bn, a 12% increase on sales of £1.17bn in 2010. The Fairtrade system also includes some environmental standards as part of producer certification. The standard requires producers to protect the natural environment as part of farm management. Producers are also encouraged to minimise the use of energy, especially energy from non-renewable sources.

Page 8

The Fairtrade premium can also help farmers to set up environmental protection programmes. Tea workers in India, for example, have invested some of their Fairtrade premium into replacing traditional wood-burning heating with a solar-panelled system. Coffee farmers in Costa Rica have used the premium to replant trees to prevent soil erosion and have invested in environmentally-friendly ovens, fuelled by recycled coffee husks and the dried shells of macadamia nuts. This means that they no longer need to cut forest trees and so can preserve the rainforest.

Lesson 2: Sustainable Fish

Page 1

Humans have been fishing the oceans for thousands of years, but over the past five decades technology has allowed us to fish farther, deeper and more efficiently than ever before. Scientists estimate that we have removed as much as 90 percent of the large predatory fish such as shark, swordfish and cod from the world's oceans. In 2003, the Pew Oceans Commission warned that the world's oceans are in a state of "silent collapse," threatening our food supply, marine economies, recreation and the natural legacy we leave our children".

Page 2

MSC and ASC certified 'Fish to eat'

The Marine Stewardship Council (MSC) was created in 1997 by the environmental organisation WWF and the food company Unilever to provide a solution to the global problem of overfishing. In 1999, the MSC became completely independent of both organisations and now manages the world's best-known environmental certification and labelling program for sustainable marine fisheries. There are over 20,000 MSC-labelled products on sale around the world, from prepared seafood meals to fresh fish from the fish shop.

Page 3

MSC principles

Working with experts, the MSC has developed standards for sustainable fishing and seafood traceability:

Principle 1: A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery.

Principle 2: Fishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem (including habitat and associated dependent and ecologically related species) on which the fishery depends.

Principle 3: The fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable.

For more information on the principles and the underlining criteria see [here](#).

Page 4

Aquaculture Stewardship Council

Founded in 2010 by WWF and IDH (Dutch Sustainable Trade Initiative) the Aquaculture Stewardship Council (ASC) is an independent not-for-profit organisation with global influence. ASC aims to be the world's leading certification and labelling programme for responsibly farmed seafood. The ASC's primary role is to manage the global standards for responsible aquaculture.

Aquaculture has rapidly developed to supply the increasing global demand for seafood. With around half of the world's seafood now sourced from aquaculture, it is the fastest growing food production system in the world. The United Nations' food agency has noted that aquaculture output is expected to rise by a third over the next decade. Given this growth, the ASC's work is both timely and vital to promote best practice and establish aquaculture as a leading industry in responsible seafood production. Today, over 16million people are directly employed by the fish farming industry and hundreds of millions dependent on it as a source of animal protein. Securing livelihoods and improving the employment conditions of those employed is a task of global significance.

Page 5

The [ASC standards](#) require:

- Comprehensive legal compliance
- Conservation of natural habitat and biodiversity
- Conservation of water resources
- Conservation of species diversity and wild populations through prevention of escapes
- Use of feed and other inputs that are sourced responsibly
- Good animal health (no unnecessary use of antibiotics and chemicals)
- Social responsibility for workers and communities impacted by farming, (e.g. no child labour, health and safety of workers, freedom of association, community relations)

If you want to learn more about the ASC certification and accreditation requirements please use this [link](#).

Test:

Question 1: What is the definition of “regional / local food”?

- Answer: Food from a specific geographical region
- Answer: Food that is produced and sold within a 50km radius
- Answer: There is no general definition for regional / local food

Question 2: How is the use of the word “organic” bound to laws or regulations in Europe?

- Answer: It's bound to the national law and differs within the countries.
- Answer: It's bound to the European law (Regulation (EG) Nr. 834/2007 & (EG) Nr. 889/2008).
- Answer: It's not bound to a law or a regulation at all and can be used as pleased.

Question 3: Which food is not particularly bound to the season?

- Answer: Venison
- Answer: vegetables and fruits
- Answer: milk and milk products

Question 4: Which label stands for sustainable aquaculture?

- Answer: The ASC-label
- Answer: The MSC-label
- Answer: The FSC-label

Question 5: Which kind of fertilizer is forbidden in the organic agriculture?

- Answer: Synthetic fertilizers
- Answer: Manure

- Answer: Compost

Unit 8 - Sourcing sustainable food

Photograph describing the unit

In this unit I will learn about:

1. Where to buy sustainable food.
2. Supply structures for sustainable food.
3. Choosing the right supplier for you.

Page 1

From supermarkets to natural food wholesalers, farmers around the corner to fishmongers in nearby ports, there are possibilities everywhere for buying sustainable food. For cooks and caterers wanting to improve the sustainability of their food offering, the best place to start is by asking existing suppliers about what they can provide. It is likely, however, that you will need to build relationships with new suppliers as well, particularly once you start to increase the range of sustainable ingredients in your menus. To begin with this can be time consuming, so it is worth approaching it procurement step by step. The goal, of course, is to build a good list of suppliers you trust and can depend on for high quality ingredients at a reasonable price.

Chapter 1: Where to buy sustainable food

Page 1

Not every kind supplier fits to every organisation, but the types listed below are a good starting point. When looking for a suitable sustainable food supplier, colleagues from other kitchens may be able to help so be sure to ask them for contact details of suppliers they use and trust. You can also look for suitable suppliers at fairs and on the internet.

- Wholesalers
- Box scheme providers
- Farms and market gardens
- Bakeries and butcher shops
- Fishmongers and dairies
- Mail order companies

Page 2

Finding a supplier that fits your needs

Criteria for deciding which kind of supplier to use include the range of different products you need; the quantity you need (a box scheme is unlikely to be able to provide the quantities needed by a public sector caterer but a farmer cooperative may); and the frequency of deliveries required. Another important criteria may be traceability - knowing exactly where the food you are getting from your supplier comes from.

Page 3

Below is a useful checklist for a range of things you may want to know before choosing a supplier:

- What type of supplier are they: wholesaler, farm, cooperative etc.?
- What range and quantities of produce/products can they supply?
- Size and approach of the farm, the processing plant or the wholesaler.

- What experience do they have of supplying commercial caterers?
- How processed are the products they supply?
- What container sizes and systems of packaging do they use?
- How regularly can they supply and in what volumes?
- How much advanced notice do they need for orders?
- Is there a dedicated contact person you can develop a relationship with?
- How do their prices compare to other providers over the year?
- What quality and hygiene management systems are in place?
- What are their payment terms?

Organisations in your country that work to promote particular types of food - such as organic, sustainable fish, vegetarianism, animal welfare or fair trade - should be able to help you identify suitable suppliers of products relating to their area of interest. In the next chapter, we explore in a bit more detail the different players in the supply chain.

Chapter 2: Supply structures for sustainable food

Lesson 1: Wholesalers

Page 1

There can be major difference in quality, price and service between wholesalers. Ask for a price list for their full range of products and speak - face to face wherever possible – from their ordering service to make sure you are happy with their approach to quality and service. You may decide to source your sustainable produce from an existing conventional wholesale supplier, most of whom can provide a reasonable range of organic, regional and fair trade products and sometimes sustainable fish. This a good approach if you are just starting the sustainable food journey and do not yet want to work with new suppliers, but for the best possible quality and service at a reasonable price it may be worth looking for a specialist natural food wholesaler.

Page 2

The advantages of a specialist natural food wholesaler include their ability to give you good advice based on solid expertise and experience of organic, local and fair-trade produce and their often greater range of products and suppliers. Many specialist natural food wholesalers can provide a full range of fresh fruit and vegetables, meat, dairy and eggs, cereals and bread, grains, pulses and non-perishable products or can put you in contact with suppliers that can. Often they will be able to supply food produced locally to you, but also deal with season or weather-related lack of supply through their wider network of supra-regional or international producers. Some wholesalers are specialists in dealing with catering and canteen kitchens, able to offer large volumes in exactly the form - for example, frozen and pre-processed - that bigger catering companies need.

Lesson 2: Local farmers

Page 1

The advantages of getting your produce direct from farms are obvious, including clear origin, freshly harvested, known quality, short supply chain and no additional costs in paying intermediaries.

Paul Wigsten from the Culinary Institute of America recommended the following quick tips for developing a good relationship with local farmers:

- Be clear about prices and review them as market conditions change.
- Set a delivery time that is realistic for both parties and stick to it.
- Place your order as early as possible to enable the farmer to deliver on time.
- Invite farmers to your venue to see what you do with their produce.

Page 2

What you should expect from farmers and they from you:

- **Farmers** need to be accessible either by phone or e-mail so you can change an order or delivery time; they need to be flexible in the size and specifications or deliveries; and they must be punctual with their deliveries and able to act on short notice to make changes when necessary.
- **You must pay on time**. This is absolutely vital as many farmers have small and vulnerable cash flows so a late payment can seriously affect their businesses and livelihoods. 30 days is the maximum you should expect a farmer to wait for payment and much shorter than this will be greatly appreciated by the farmer who will step over themselves to help a good, promptly paying customer.

Page 3

While farmers can, to some extent, adjust what they produce according to the needs of the buyer, at least in the case of large caterers that can guarantee large volume demand throughout the year, most single farmers will always only have a limited range of products on offer and only then in season. Single smaller-scale farmers are also less likely to be able meet the need for pre-processed products which many large caterers demand and which can be a deciding factor for those caterers in choosing which farmers to source from (see the next chapter). If you need large volumes of pre-processed products, do keep looking as many farmers are starting to pre-process their products on their own farms or are joining agricultural cooperatives to do so.

Page 4

More and more, farmers are coming together to form agricultural cooperatives that combine their produce to ensure the kind of range, volumes, pre-processing, service and delivery needed by larger buyers. If a caterer is buying large volumes, agricultural cooperatives will often discount in season, which provides even more opportunity for you to offer 'localise' your food offering.

Page 5

For caterers such as individual restaurants requiring smaller volumes a box scheme delivery may work well in providing many of the local elements of your menu, particularly in terms of seasonal vegetables. Many box scheme operators can be flexible about different proportions of what they include in the box and may also be able to offer larger volumes of required produce - including meat, cheese and eggs - or help direct you to good local producers and processors who can.

Lesson 3: Pre-processors

Page 1

Canteens and big kitchens often need large volumes of pre-processed food - such as peeled potatoes, ready-cut vegetables, washed salads and frozen and convenience foods - to be able to serve the number of meals they do. In order to fill this growing demand, more and more pre-processing companies have set up in recent years.

Page 2

These companies are designed to serve the specific needs of large and medium sized catering enterprises and even high volume restaurants. Products can usually be ordered either directly from the pre-processor or via the wholesaler. Often these companies are able to tell you where many of their products from but, as they grow and the volumes they sell increases, the suppliers of raw ingredients tend to come from further and further away and traceability decreases.

Lesson 4: Specialists

Page 1

While for the most part the rise of supermarkets has rung the death knell of local specialist food retailers, in some areas there has been a resurgence in butchers, bakers, grocers and fishmongers who have managed to develop very strong trading relationships with local restaurants and caterers based on exceptionally high quality products, clear traceability and an inspiring 'food story'.

Page 2

These specialist food retailers are the experts of their trade, so can provide a level of personal service unrivalled by any of the larger companies. You may also be surprised by what good value for money they offer, unencumbered as they are by middlemen and high overhead and transport costs.

Chapter 3: Choosing the right supplier for you

Lesson 1: Getting the balance right

Page 1

While finding a supplier that can provide the right products, in the right volumes and at the right prices is vital, it is also important that they also understand and can meet the needs of your operation, based both on experience and on a shared philosophy about quality, service and sustainability. Good buyer-supplier relationships are those based on personal contact and mutual respect and while the prices of larger faceless suppliers may be lower, you may well find you get what you pay for and that product quality and reliability of service suffers as a result, which could have a significantly negative impact on your catering establishment.

Page 2

A few top tips for changing your food supply:

- Talk to existing suppliers - ask if they offer any local, fair trade or organic products and on what terms.
- Introduce small changes - during the growing season, replace a few foods that you already serve with the same product from local and/or organic farmers.
- Learn about local agriculture - visit farmers markets and local farm associations about farmers near you.
- See producers in action - spend some time visiting farms and invite farmers you like to your catering outlet to gain better insight into how you can work together.
- Take your time and be patient - buying sustainable food is very rewarding but can take time, so be flexible and set realistic expectations and goals.

Test

Question 1: Where can you buy sustainable food?

- Answer: At natural food sellers only
- Answer: At local farms only
- Answer: You can make sustainable choices almost everywhere, even with a conventional whole seller.

Question 2: Which is not a recommended step to start a change in the supply chain?

- Answer: start small
- Answer: Change all your ingredience at once to sustainable food
- Answer: Let your customers know what you are doing
- Answer: Tour farms to gain better insight into how you can work together

Question 3: Some sellers for sustainable food have a minimum order value. How should you handle this?

- Answer: Order packed, longer shelf life products in bigger amounts and therefore more seldom
- Answer: Avoid minimum order values
- Answer: Buy bigger amounts of vegetables, meats etc. to reach the minimum, even if you have to throw it away

Question 4: Which advantage does a direct trading with a local farmer not offer?

- Answer: Transparency
- Answer: Short ways of delivery
- Answer: Fully stocked range of products

Question 5: Which statement is not true?

- Answer: Wholesale dealers of natural food do not offer preprocessed and frozen food.
- Answer: There are wholefood sellers who are specialized to deal with catering and canteen kitchens and who offer their products directly to large-scale consumers
- Answer: Box delivery services often have the advantage of delivery free-house also when only small amounts are ordered

Unit 9 - Strategies for keep costs down

In this unit I will learn about:

- Strategies to avoid cost explosion when using sustainable food
- How to calculate your meals
- How to adjust recipes and week plans so that the costs are in balance

After finishing this module you will have learnt:

- how to combine different strategies to keep the costs down
- how mixed calculation works
- how chefs form “good practice kitchens” have changed their buying and cooking behaviours to keep the costs in balance

Chapter 1:

Introduction

Page 1

There is no doubt that organic food, sustainable seafood and fair trade products are usually more expensive than their industrial equivalents. Organic farming is generally more labour-intensive; the animals are kept in lower densities and better, more natural conditions; yields are lower and the risk to crops is higher than with conventional farming because as no pesticides are used. Sustainable seafood is caught in a way that does not destroy wild stocks or produced in lower densities; and for fair trade goods social standards are met and fair (meaning higher) and generally more stable prices are paid to the producer.

Page 2

But with a bit of effort, creativity and few tricks, cooks and caterers can serve sustainable meals while keeping costs at an acceptable level and, in many instances, without incurring any additional cost across their weekly menu. This has been proved again and again by kitchens that have now partially or even completely changed to sustainable ingredients. The key is to not just replace each ingredient with a sustainable alternative, but to take a new approach to menu planning and to reorganise the way you source produce, prepare meals, prevent waste and promote your food offering.

Lesson 1: Steps to keep your ingredient costs stable

Page 1

In this lesson you learn different strategies on how to keep your ingredient costs as low as possible while improving their quality and sustainability. To do this, we are going to go back to basics.

Page 2

Back to basics 1: Calculating ingredient costs

In many kitchens, the ingredients are ordered for a week and used without knowing how much is spent on each dish or what proportion the ingredient cost makes up of the total cost of preparing and serving that dish. For example, for a school lunch that is delivered at a cost of £2.50 per head to pupils, usually only about a third is spent on ingredients.

The remaining two thirds covers staff costs, administration, logistics, energy use, depreciation and replacement of kitchen and dining equipment and utensils etc. So, if you want to serve more sustainable food it is vital to know exactly how much you are already paying for the ingredients in order to absorb or compensate for any additional cost through cost-savings measures elsewhere in your operation.

Page 3

Steps to calculate ingredient cost per portion:

Clarify the number of servings and the specified portions by weight/volume. Look at product catalogues for the price per kilogram. Multiply the quantities and prices to get the cost for one portion.

Example: Carrot and potato soup

(figures shown are for illustrative purposes only)

Ingredients for 10 people	Amount of ingredient kg	Ingredient price per kg	Price for 10 people	Price per serving
Potato	1.0	1.15	1.15	0.115
Carrots	0.5	2.05	1.03	0.103
Onion	0.1	1.75	0.18	0.018
Stock	0.02	8.75	0.18	0.018
Cream	0.5	2.75	1.38	0.138
Herbs	0.02	20.50	0.41	0.041
Salt/pepper	0.002	24.60	0.05	0.005
Total			4.38	0.438

Page 4

Back to basics 2: Sustainable versus conventional ingredient costs

While prices for commodities from sustainable production as compared to conventional farming may generally be higher, the difference between the two is hard to quantify and depend on the season and who the produce is sourced from. For example, seasonal vegetables sourced direct from a local organic producer may be the same or a lower price than those sourced from a national wholesaler as there tend to be wider price fluctuations for local seasonal produce than for global produce.

Page 5

Where there are sustained differences in price, a general rule is that the price difference will be smaller for foodstuffs such as cereals, pasta, rice and legumes and higher for animal products such as meat, fish, dairy and eggs. So, if you are going to change your ingredients towards more sustainable ones and if price is the most important factor, you may want to change the staples first, move on to seasonal fruit and vegetables and then eggs and dairy before tackling meat and fish. But remember, if you reduce the amount of meat and fish served each week, you could easily produce the same weekly menu with sustainable meat and fish at no extra cost.

Page 6

In the following table the different costs for a few individual products are shown to illustrate costs comparisons between conventional and organic, MSC and Fairtrade equivalents:

Example from your country:

Production method	Conventional	Organic	MSC	Fairtrade
Product wholesale price 2014 (1 kg)				
Wheat				
Wholemeal rice				
Tomatoes in season				
Frozen broccoli				
Milk (1 litre)				
Butter				
Minced meat				
Rump steak				
Sea fish				
Coffee				

Page 7

Back to basics 3: Fresh cooking versus convenience products

Convenience/processed products from sustainable production are relatively much more expensive than their conventional equivalents. This is partly because certain ingredients are not allowed in organic products, and secondly because compared to the conventional food industry, the production of convenience/processed sustainable products is relatively small and cannot compete with the economies of scale of mass-produced industrial food. The fewer convenience/processed products you use, the smaller the cost differential will be per portion and while cooking from fresh requires more staff, doing so means you will be serving much tastier and healthier unprocessed meals while driving down costs related to waste.

Page 8

Back to basics 4: Taking advantage of seasonal food

Cooking with seasonal produce can bring big savings as producers and wholesalers will often discount during high season when there is surplus produce about. Investigate when each local fruit and vegetable is in season and find out which producers can supply you in the volumes and at the price you need. If you know in advance what low-cost produce is available when, you can plan your menus accordingly and incorporate more cost-saving seasonal produce in every meal. You will need some flexibility in your forward menu plan, just in case it turns out to be a poor harvest for one or two seasonal ingredients, but there will normally be other produce you can use as a substitute.

Page 9

For caterers buying direct from farmers, you may also be able to secure seasonal /loyalty discounts on meat, dairy, eggs, potatoes or cereals. If the farmer accepts you as a reliable and flexible trading partner, he may well be willing to offer you special deals on any surplus he has across his produce range and will be particularly keen if you can take small amounts of surplus at short notice. For restaurants serving small volumes that can be flexible at short notice in adjusting their menu this can really work, though may be less easy for high volumes caterers and those with fixed menu cycles.

Page 10

Back to basics 5: Meat reduction

One of new mantras of modern cuisine is 'quality not quantity', particularly with regard to meat. It is now commonly accepted meat has the biggest negative impact on our health and on the environment of all the food groups, so while customer still expect to see meat on their plate they are more open to seeing less of it in each serving as long as it is not to the detriment of overall flavour.

Page 11

One 'trick' is to use less common cuts of meat. These are often better slow cooked and used minced or diced or for stews. They have great flavour and though less popular in today's cooking used to be eaten all the time. Cheap cuts can be half the price of more common ones, so you can either reduce your overall meat cost or use organic meat instead without any increase in cost. They include:

- Beef: brisket, skirt, leg, shin, flank, silverside and tail.
- Lamb: shoulder, scrag and middle neck, chump and breast.
- Pork: spare rib, chump, belly, hand and spring, cheek and neck.

Your local butcher will be able to talk you through which cuts are best for different recipes and may well be able to supply all your needs at a great price.

Page 12

As well using cheap cuts, sustainable caterers use meat substitutes such as pulses, nuts and grains either to bulk out meat-based meals without losing texture - for example by adding lentils to a smaller quantity of meat in a lasagne – or to create entirely meat-free meals that still have a 'meaty' texture and flavour. It is important that such meat-free dishes don't become bland, however, so it becomes increasingly important to use a wide array of herbs and spices in these meals to maintain flavour and interest, as is so effectively achieved in Asian cuisine.

Page 13

Back to basics 6: Bulk discounts

One very basic general rule in procurement is that the bigger volume you order and get delivered at the same time the better price you can negotiate and, by the same measure, things in big bags/jars/boxes cost relatively less than things in small bags/jars/boxes. While a sustainable kitchen is likely to be using mostly fresh produce like fruit and vegetables that cannot be stored for extended periods, it is important to make the most of what storage space you have to make savings on bulk purchases where possible.

Page 14

If your storage space is limited, particularly in terms of cold storage and freezer space, a great place to start with bulk buying is with high value and high density products such as flour, grains, pulses, dried fruit etc. These cost a fraction of the price per unit when bought in say 30 kilo sacks rather than in multiple 500g packets. Whatever your catering enterprise, you are likely to be able to make good savings through bulk buying so it is worth spending the time exploring what will work for you, but remember - saving money as produce comes into your kitchen is no good to you if it is just ends up going out of your kitchen as waste, so only bulk buy if you are confident you will use the produce.

Lesson 2: Quick guide to cost-conscious menu planning

Principle	Action
Know your costs	<ul style="list-style-type: none"> • Systematically review all your ingredient costs so you can effectively calculate your dishes. • Are your most costly dishes also your most popular? If not, adapt or discontinue them.
Mixed calculation	<ul style="list-style-type: none"> • Alternate cheaper and more expensive dishes over your menu cycle to even out costs. • Start by substituting sustainable for conventional ingredients where the price difference is smallest.
Convenience products	<ul style="list-style-type: none"> • Processed food is generally more expensive so try to cook from scratch whenever possible. • Think about whether you need certain processed ingredients at all - often there are simpler alternatives.
Seasonal produce	<ul style="list-style-type: none"> • See what's in season year-round and plan your menu accordingly to make the best cost savings. • Be flexible in planning your menus, so you can respond to short term supply changes - think about substitutes ingredients.
Reduce meat	<ul style="list-style-type: none"> • Meat is generally the most expensive staple so think about how to reduce the quantity of meat in each meal. • Use more meat substitutes and try meat free-recipes and meat free days.
Cheap cuts	<ul style="list-style-type: none"> • Introduce more recipes that lend themselves to minced and diced meat ingredients. • Buy cheaper cuts of meat and get advice from your butcher on which cuts work for which recipe.
Bulk buy	<ul style="list-style-type: none"> • Review all your dry, chilled and freezer storage and think about how you can use it to best effect. • Prioritise bulk purchases of high value, high density products with a long storage life.
Reduce food waste	<ul style="list-style-type: none"> • Wasted food is wasted money, so try to prepare and serve the right amount for your customers. • Make sure that any leftover food still fit to eat gets kept and used for further meals.

Chapter 3: Bringing it all together

I have deleted the previous Chapter 3 and suggest it is included as a link/attachment and moved the example below from higher upper in the document as to me if brings together all the issues talked about previously in a practical way. BUT it will need to be edited for each country before going on Moodle as I can't access/amend the tables. It is too confusing at the moment so also needs simplifying.

Page 1

The attached example shows how you can change a meat dish in a manner that the described strategies are used.

In the example, the costs of one portion of sliced beef with fresh vegetables are calculated with conventional and with organic prices. Without varying the quantity proportions of the recipe, the costs will increase by 88 % from EUR 1.12 to EUR 2.10.

Products	Quantity/ Portion	Quantity 100 Port.	Unit	Dish with conv. Products		Dish with org. Products		Extra Costs ecological [%]
				Price/ Unit	Price complete	Price/ Unit	Price complete	
Beef stew	0,135	13,50	kg	3,99	52,65	8,18	118,94	105%
Leeks	0,025	2,50	kg	1,56	3,90	2,58	6,45	66%
Kohlrabi	0,020	2,00	kg	2,56	5,12	2,91	5,82	14%
Carrots	0,020	2,00	kg	1,20	2,40	1,51	3,02	26%
Celeriac	0,020	2,00	kg	2,53	5,06	2,76	5,52	9%
Mushrooms	0,020	2,00	kg	3,22	6,44	6,19	12,38	92%
Pepper	0,025	2,50	kg	3,37	8,43	4,35	10,88	29%
Brown Sauce	0,050	5,00	l	0,91	4,55	1,32	6,60	45%
Cream	0,020	2,00	l	1,80	3,60	2,99	5,98	66%
Summer Vegetable	0,050	5,00	kg	1,18	5,90	2,02	10,10	72%
Butter	0,010	1,00	kg	3,91	3,91	6,01	6,01	54%
Milk	0,040	4,00	l	0,49	2,45	0,95	3,80	95%
Beans	0,030	3,00	kg	0,90	2,70	1,56	4,68	73%
spicery, other					5,00		9,71	95%
WE complete:					112,11		209,89	
WE Portion:					1,12		2,10	88%

Quelle: aid infodienst 2001

In the following example, the proportions have been changed in the recipe. The proportion of favourable seasonal vegetables available has been increased. The proportions of expensive peppers and summer vegetables have been reduced. Mushrooms, which are in their unit value nearly twice as expensive as conventional commodities have been deleted.

The quantity of meat per dish was reduced. By these measures 49% of organic products could be used while the costs per dish have increased by 4 % only.

Products	Quantity/ Portion	Quantity 100 Port.	Unit	Dish with conv. Products		Dish with org. Products		Extra Costs ecological [%]
				Price/ Unit	Price complete	Price/ Unit	Price complete	
Beef stew	0,100	10,00	kg	3,99	52,65	3,99	39,90	0%
Leeks	0,030	3,00	kg	1,56	3,90	2,58	7,74	66%
Kohlrabi	0,030	3,00	kg	2,56	5,12	2,91	8,73	14%
Carrots	0,050	5,00	kg	1,20	2,40	1,51	7,55	26%
Celeriac	0,050	5,00	kg	2,53	5,06	2,76	13,80	9%
Mushrooms	0,020	2,00	kg	3,22	6,44	6,19	0,00	92%
Pepper	0,020	2,00	kg	3,37	8,43	4,35	8,70	29%
Brown Sauce	0,050	5,00	l	0,91	4,55	0,91	4,55	0%
Cream	0,020	2,00	l	1,80	3,60	1,80	3,60	0%
Summer Vegetable	0,030	3,00	kg	1,18	5,90	2,02	6,06	72%
Butter	0,010	1,00	kg	3,91	3,91	3,91	3,91	0%
Milk	0,040	4,00	l	0,49	2,45	0,49	2,45	0%
Beans	0,030	3,00	kg	0,90	2,70	1,56	4,68	73%
spicery, other					5,00		5,00	0%
WE complete:					112,11		116,67	
WE Portion:					1,12		1,17	4%

Glossary of terms:

Aquaculture: Aquaculture, also known as aquafarming, is the farming of aquatic organisms such as [fish](#), [crustaceans](#), [molluscs](#) and [aquatic plants](#).

Convenience Products (CP): Convenience food, or tertiary processed food, is commercially prepared food designed to make consumption easier. Convenience foods include prepared foods such as ready-to-eat foods, frozen foods such as TV dinners, shelf-stable products and prepared mixes such as cake mix.

Organic regulations: Organic agriculture in the Eu is defined by the following Eu Regulations: Regulation (EG) Nr. 834/2007 & (EG) Nr. 889/2008.

WWF: The World Wide Fund for Nature (WWF) is an international non-governmental organization founded on April 26 1961, and is working on issues regarding the conservation, research and restoration of the environment, formerly named the World Wildlife Fund, which remains its official name in Canada and the United States.

Agricultural cooperatives: An agricultural cooperative, also known as a farmers' co-op, is a cooperative where farmers pool their resources in certain areas of activity. In a lot of cases they share marketing activities. E.G. small farms market their potatoes together so that they can all sell their potatoes to a supermarket who needs big quantities at once.

Wholesalers: Wholesaling or distributing is the sale of goods or merchandise to retailers; to industrial, commercial, institutional, or other professional business users; or to other wholesalers and related subordinated services. In general, it is the sale of goods to anyone other than a standard consumer.

Bulk food: Bulk foods are food items offered in large quantities, which can be purchased in large, bulk lots or transferred from a bulk container into a smaller container for purchase. In canteen kitchens it is often more convenient to open one bulk of pasta than to open 20 packages if you cook 100 pasta dishes.

Mixed calculation: compensating the cost of a high priced recipe (e.g. meat dish) with a low cost dish (e.g. pasta dish)

Test:

Question 1: Which is generally no reason for organic / sustainable food to be more expensive?

- Answer: Organic farming is more labor-intense
- Answer: Animals are kept in a species-appropriate way and have generally more time to grow
- Answer: Producers of organic food have a bigger profit margin

Question 2 : Which is not a good strategy if you want to save money while buying more sustainable food?

- Answer: Simply replace the ingredients with more sustainable produced food
- Answer: use less meat
- Answer: buy more seasonal food
- Answer: Use mixed calculations

Question 3: In which foodstuffs is the price difference lowest compared to conventional products?

- Answer: meat and fish
- Answer: cereals, rice and pasta
- Answer: dairy and dairy products

Question 4: How can you save money when producing finger food for kindergarten children?

- Answer: By always using tomatoes, peppers and cucumbers because they are cheap
- Answer: by choosing vegetables and fruits according to the season
- Answer: by reducing the portion size

Question 5: What does “mixed calculation” mean?

- Answer: compensating the costs of a high priced recipe (e.g. meat dish) with a low cost dish (e.g. pasta dish)
- Answer: calculation of mixed-food prices such as smoothies
- Answer: if you have a mistake in the calculation

Module 4 "Preparation"

Unit 10: Making meals with healthy and sustainable ingredients

To introduce learners to issues, specific techniques and approaches related to preparing more healthy and sustainable meals, such as nutrient-preserving ways of preparing food and working with raw, unprocessed, less processed, substitute and less common ingredients.

Unit 11: Kitchen management, including energy and water

To increase learners' understanding of how to store, preserve and manage food before and after meal preparation; and on materials, devices and techniques to reduce water and energy use.

Unit 12: Minimising packaging and waste

To introduce the concept of the food waste hierarchy across the entire food chain - from field to fork to landfill - and help learners to reduce, reuse and recycle food packaging and waste through better food purchasing, preparation, management and disposal.

After Finishing this Module, I will have learnt....

1. How to prepare dishes sparing raw material.
2. How to cook minimizing the waste of food, water, energy.
3. How to prepare gorgeous dishes applying sustainable preparing techniques.

Unit 10: Sustainable Meal Preparation

Photograph describing the unit

In this Unit I will learn how to:

- How to prepare food sustainable
- Impacts of cooking
- How to prepare organic / bio food

Introduction

Chapter 1 – Food preparation

Lesson 1: Cutting & Portions

Page 1

When cooking, a way to reduce the waste of energy is to cut food as much thin as possible: so cooking is more fast and we can easily spare energy.

Some ways are:

- mince;
- chop;
- cut lengthwise;
- slice up.

In addition, when we have hard ingredients (like leaves' artichoke), it's advisable to boil them for some minutes.

Page 2

A good standard to avoid waste of food, water and energy waste, both in preparation phase and then in storage phase is how are made portions.

The basic principle is to minimize the number of cooking. To make that, two strategies are advisable:

- To cook only the right number of the required portions: to buy and consume right, that is according to ourselves real calorie needs, is a healthy and low-cost principle because we can avoid the overweight risk, not produce leftovers and so economize.

Page 3

- If we cook a plenty of food, we will divide into small portions and appropriately conserve, freezing.

How to manage portions after cooking? One way to save up energy and time is how to make portions and then freeze them.

It's advisable to make little portions.

Put portions into either glass or plastic box or freezer bag (when foods have little water);

Page 4

Not put hot food into the freezer;

Pay attention to the freezer temperature: it must stay at fixed temperature;

Wash, dry and crumble the herb leaves and then freeze them;

Wash, cut and parboil vegetables, cool, drip and then freeze them: so they keep colour, taste and consistency;

Peel, slice up or cut to pieces fruits and then freeze them;

Wash and dry fish and then freeze it.

Page 5

In the case of the refectories, the attention of portions is acquiring an increase importance to the possible correlation between bodily weight and the middle size of portions rather than the qualitative made by user choices of food.

So it's need to prepare menu according to recommended for the different range of age supplies and it's need to give meals with suitable equipments (which assure the appropriate portion with an only taking) or in a fixed number of already shared pieces.

☐ **To put in table: Portions quantity by age**

Lesson 2 Storing and conservation

Page 1

To avoid food waste it is particularly useful to know how rightly store it as well, that is to say to know how slow down alteration processes to which foods are exposed.

To obtain this result, we need not to overlook three aspects: temperature, light and packaging.

Here below, we describe the main storing techniques:

IN SAND: it's ideal for tuber conservation (for example, onions, potatoes, carrots...).

Page 2

SALTED: it's an old conservation technique great for vegetables, fish and meat whereas the salt dehydrate the cells and prevent microbes developing.

IN HONEY, WITH SUGAR: like salt, in suitable concentrations, it avoids food fermentation and it can be applied, for example, to the fruit in syrup or to the candied peel, however it increases calorific value and it decreases the supply of vitamin C.

Page 3

IN OIL: like every fat, the oil closes the product off oxygen preventing the aerobic microorganisms from acting. It's a very widespread technique especially for vegetables and fish but it causes also a loss of nutritive substances and increases the quantity of calories.

TO PICKLE: thanks to vinegar's proprieties food, in this case the vegetables, is preserved by the deterioration. We cut food in small pieces, we parboil, we make dripping them and we dip them into the vinegar or into a acetic acid solution (instead in the industries others technique are used, like the addition of chemical additives, which cause the loss of nutritive substances).

Page 4

IN ALCOHOL: it's used at high concentration (above 60%) or with the addition of sugar to conserve several types of fruits (like cherries) but that causes both a palatable and intense taste and a total elimination of vitamins.

CURING: we get it exposing food to the smoke produced by the slow combustion of aromatic woods. This technique has antiseptic, antioxidant and anti-microbic proprieties. There are two types of curing: that without pre-heating, when food gets warmed up for

days or whole weeks at temperature between 20° and 45°, that warm, when food gets warmed up for few hours at temperature between 50° and 90.

Page 5

DRYING PROCESS: this method consists in to take the liquids from foods exposing them to hot currents. There are several ways to dry: from the economic exposure to the sun to the radiator.

It's used for meat, fish, cereals and fruits. It's a technique that keeps unaltered the organoleptic and nutritive characteristics of foods, with the exception of vitamin C. At home we can dry using oven at 70° or a domestic radiator, carried out handmade putting at the center of a carton's or wood's box an old lamp and arranging two grilles above bulb.

VACUUM-SEALED PACK: slowing down the oxidation of foods and their consequent deterioration and avoiding the parasites' attack, the life of raw materials is extended for at least five times, keeping unaltered taste and nutritive proprieties. Nowadays it's possible to buy domestic machine to the vacuum-sealed packaging, whose bags can be used even to the cooking (see cooking in dishwasher).

Chapter 2: Cooking impact

Lesson 1 Generalities

Page 1

We cook food for three main reasons, linked to the wealth and health of own organism:

- Because food becomes more digestible;
- For sanitary reasons;
- To make tastiest food.

In addition when we cook, we can contribute more or less to the greenhouse effect: so when it's possible, it's advisable to use low impact cooking techniques.

Page 2

Nowadays for refectories most schools, universities, sanitary facilities and company apply to outside restoration society which have a particular cooking technique: "Cook & Chill". This is a preparation meal system based on cooking and refrigeration according to that, at the end of the cooking (we can be what we want), aliments undergo a fast cooling in order to keep the organoleptic proprieties, answering at the same time for the slowdown of proliferation process of agent which are able to adulterate them.

Page 3

To the complexity of this process and to its right carrying out in every passage, it's need to adopt very standard working methods, that is:

- **COOKING:** the raw material is cooking at 75° C to heart for also 10 minuts.
- **RAPID CHILLING:** in a cooling cell the raw material arrives to a uniform or lower than 3° C temperature to heart, by 120 minutes from the end of cooking.

Page 4

CONSERVATION: food has to be kept at 3°C without stoppage of cold chain and in this way it can be ate by 5 days (from the production day). Besides that self life can be extended with the use of storage through protective atmosphere: so the packaging has to be made by 30 minutes from the end of chilling.

Page 5

TRANSPORT: it has to be made through transports with refrigerant temperature and once that food is arrived to destination, it could be put in cool cells up to the consumption moment.

REGENERATION: through a special thermo-refrigerating oven (which is able to bring back the meal temperature from 3 to + 65°/75° C in about 30 minutes) food get warmed by 30 minutes since aliments have been removed from the cool cell.

“COOK & CHILL” benefits:

This method allows

- inalteration of food's organoleptic properties,
- maximisation of the organisation,
- higher quality of deal (freshness, colour, taste, etc.),
- improvement of equipment's use and of staff who works in the deals distribution.

Lesson 2: Low, middle and high impact cooking technique

Page 1

COOKING IN PRESSURE COOKER: the pressure cooker is formed by a cylindrical main part with an hermetic seal cap and equipped with levers or particular mechanisms. Some valves, set on the cap, enable to have a constant pressure into the cooker so that food can be boiled, and so cooked, at 120° (instead of 100°). These 20° more are those who make difference i.e. allow a save time to cook. Obviously the pressure cooker is ideal for to stew, to boil..., less for more elaborate cooking.

Page 2

STEAMER: foods are set on a permeable or supplied with holes surface and below them there is a water layer. Covering the pot (or the bamboo's basket) it's got a circulation of steam where food is cooked: in this way the taste, the aroma, the nutritive principle and the liquids are maintained, without dispersing in the water.

Page 3

COOKING WITH INDUCTION STOVE: when a metallic ferrous container is set on a plate, an electric inductor, which is put down the plate, produces a magnetic field. This field causes currents inside, named of Focault, which turn the magnetic energy into heat, warming the pot inside. This technique is at low environmental impact because, even if induction cookers depend on the electric current, the induction cooking becomes operative only when it is of use, the cooking time are lower and the efficiency is the 90%. It calls for pots built with hight ferrous content steel and a change of custom in the calculation of cooking time, which is halved.

Page 5

COOKING IN WOK POT: the wok pot is a pan with a hemispheric rounded shape with a diameter long from 20 to 36 cm and it's made in iron, cast iron and steel. The difference of temperature between sides and the bottom of the saucepan enables a fast “jump” cooking and a delicious frying with few added oils.

BOILING IN POT: consists in the cooking in pot with water at low temperature and it not causes a substantial loss of nutritive principles and permits to avoid the increase of condiment fat.

WARMING PLATE: it's a one of more traditional and simply cooking technique and it keeps integral the proprieties of food.

Page 6

High impact technique

- **FRYING:** food is dipped into a fat body at high temperature (150°-190°) and so its caloric potential increases, while the vitamins decrease and the acrolein, which is injurious to the liver, gets form.
- **OVEN**
- **BARBECUE:** it's necessary paying attention to not turn up the flame: in fact the fats, that receive too much heat and that fall into the flame, develop potentially cancerogenic substances which hang in the food.

Chapter 3 – How to prepare organic food

Lesson 1: Advantages of organic products

Page 1

Using organic products in the collective catering is a relevant practice of sustainability kitchen, especially for supporting a farming production, which can be sustainable for the environment and healthy.

Indeed, food services give priority to the offer quality increase, operating by this way:

Availing the short food distribution chain, that is to use products covering not too many kilometers from farm to fork;

Page 2

- Using fruit and vegetables, following the seasonality;
- Preferring local certificated products;
- Cooking aliments come from Fair Trade market when it could be not possible to find them in the local one.

So the first question that the restoration society must deal with is the selection of supplying firms according to the next standards:

- Respect of the seasonal nature;
- Development of the fertility of soil and biodiversity;

Page 3

- The more possible reduced distance between producer and consumer;
- Organic Certification;
- Fair Price in comparison to the production quality;
- Logistic efficiency;
- Providers able to assure a regular supply.

The second issue is to work out menus, following seasonality, respecting bio-diversity and considering the nutritional quality of aliments.

It has also a purposeful educational, nutritional and environmental value and it can also form an essential saving of economical resources.

Lesson 2: Tips for introducing organic food

Page 1

Therefore, when preparing dishes, before elaborating menus, it is of paramount importance to check if chosen products are compliant with the national and EU regulations. In other words, every product must have a technical sheet where all its

characteristics are specified: DOP, IGP, etc., absence of OGM, absence of additives and food coloring substances.

It must be draw up an annual menu, in order to follow seasonality and to allow producer to plan production.

Page 2

Some advices:

- No main courses.
- Introduction of vegetarian week almost once a month.
- Put in a local tradition dish at least once a week.

Page 3

Menu must include:

First dish: cereals prepared with different receipts and combined either with seasonal vegetables or pulses.

Second dish: white o red meat, fish, eggs, salami and cheese.

Side dish: Fresh seasonal vegetables.

Page 4

The extra virgin olive oil and iodized salt are more preferable condiment, butter only in little receipts.

The last issue is to make these dishes gorgeous: this is the real hit!

That is possible by customer satisfaction care: kids, parents, teachers... are tested about meal pleasantness.

Test

Question 1: According to which principle portions are made in canteens?

- The ratio between food quantity and age, sex and physical activity;
- A standard quantity for everybody;
- How much the consumer wishes.

Question 2: Which is the conserve method that alters food nutritive properties less?

- In oil conservation.
- Vacuum-sealed packaging.
- In alcohol conservation.

Question 3: Which sentence does it contain the "Cook and Chill" working steps in the correct order?

- Conservation; portion division; transport; regeneration; cooking; rapid chilling.

- Cooking; rapid chilling; conservation; portion division; transport; regeneration.

- Portion division; cooking; conservation; rapid chilling; transport; regeneration.

Question 4: Which is the lower impact technique among the following ones?

- Frying
- Cooking in wok pot
- Steamer

Question 5: According to which criterion the catering companies should choose their suppliers, taking into account food sustainability?

- Development of organic agriculture and biodiversity
- Lower prices
- Development of extensive agriculture

Unit 11: Kitchen sustainable management

Photograph describing the unit

In this Unit I will learn:

- How to Use water and energy during food preparation,
- How to use dishwasher,
- More about tools and equipments.

Introduction

Chapter 1: Using water and energy during food preparation

Lesson 1: Energy

Page 1

At home, during preparation, it's possible to reduce energy waste adopting some simple tricks:

- To use appropriate pots to burner size;
- To cover pots with lids during cooking;
- To keep clean hob and burner;
- To clean oven at the end of every cooking;
- To take advantage of residual heat.

Page 2

In the public catering, spare energy following what we said in chapter "How to prepare Bio-Food":

- reduce food transport, having resort to local producers;
- decrease rubbish production making right portions and reusing them (trough, for example, composting or giving leftovers to social initiative centers);

Page 3

- Use recyclable tableware, made of PSM/PLA (maize starch by-products) or cellulose flesh;
- Organic food;
- Ecological furniture;
- High energy efficiency for household appliances;
- Periodic control of packing in oven, fridge, etc.;
- Use of microwave oven rather than electrical resistance oven;

- Prefer natural ventilation;
- Periodic control of air conditioner cleaners;
- Arrange cooling systems far from heat source;

Page 4

- Place high energy efficiency fluorescent lamps;
- Set hot sanitary water production systems lower than 60°C;
- Place condensation boiler or high energy efficiency boiler;
- Check the building thermal insulation;
- Set on the roof thermal solar system to heat water;
- Link dishwasher machine to thermal solar system.

Lesson 2: Water

Page 1

At home, preparing meal, it's possible to reduce water waste adopting these measures:

- recycle cooking water (for example to remove grease from dishes);
- install low-flow faucet on your sink.
- wash vegetable and fruits in a large bowl or tub of water and scrub them with a vegetable brush.

Page 2

- boil food in as little water as possible, to save water and fuel. You just need enough water to submerge your pasta and potatoes: using less water, you keep more flavour and nutrients in your veggies.
- To try to drink tap water.

Above all, the choice of household electrical appliances could make a big difference to spare energy.

Page 3

In the collective catering, an important aspect of water economy is drink management. When drinks are served in plastic bottles, they entail waste problems but, due to hygienical-sanitary reasons, as opened but not finished bottles must be thrown in the trash in any case. So, a good fast solution is to use tap water, if necessary having resort to specific filters if a high quantity of limestone is present in the water.

Page 4

The tap water has a quality equal to or higher than the mineral one: indeed, regulations draws more restricted rules about drinking water in comparison with mineral water. Public distributed water is put through more frequently controls than the latter. The evident benefits of using tap water are to avoid the environmental impacts of plastic bottle production, transport and final waste.

Chapter 2: Dishwasher

Lesson 1: Generalities about Dishwasher

Page 1

If we want a sustainable cook, it is necessary to take into account some points about kitchen appliances:

- The characteristics of sustainable material (material recyclability, reuse...);
- The characteristics of sustainable project (flexibility...);
- Performance of technological system.

Page 2

The third point includes:

- Use of recyclable materials;
- Minimization of transport;
- Interchangeable parts appliances;
- Recyclable components;
- Labeling of pieces;
- Maintenance capability.

Page 3

We can check all these aspects of kitchen appliances through the labels which inform us about their energy consumption rate.

The label must be set on the kitchen appliance and it is divided in:

- Part 1, kitchen appliance typology;
- Part 2, energetic class (from A to G) through stained arrows of different length;
- Part 3, annual consumption by kilowatt/hour;
- Part 4, appliance capacitance (for example washing efficiency of washing machine, covers number of dishwasher...).

Besides, label shows appliance volume, loading capacity and functional performance. It must include EU brand.

Grafic: Energie efficiency table

Page 4

Usually, a professional dishwasher has four washing programs, differing by temperature, duration, water and power consumption):

- ECO: 50-55° C, 2h e 30 – 3h, 10-18 l, 1-1,3 kWh ;
- FAST: 60-65° - 30 MIN;
- NORMAL/AUTOMATIC: 60-65°, 1h e 30 – 2h e 45, 9-22 l, 0,90-1,7 kWh;
- INTENSIVE: 70-75°, circa 2h e 30, 14-25 l, 1,3-1,7 kWh.

Lesson 2: Choose the Dishwasher machines

Page 1

It's evaluated that washing up using running water involves a consumption of about 60 l of water per household per year.

But, we consume only 16 l of water using a class A dishwasher with "eco" program, whereas a lower class appliance consumes about 26 l of water.

Page 2

Below some advices how to choose and use your dishwasher:

- choose only high energy efficiency dishwasher (A+; A++; A+++);
- use network hot water;
- contain the drying use;
- remove the leftovers from dishwasher;
- use only necessary soap;

- use automatic programme;
- wash at low temperature;
- set water purifier rightly;
- try to cook foods in dishwasher, putting food into a vacuum-bag or jar and taking advantage of given heat out.

Page 3

Regarding industrial dishwashers the big dimensions increase energy consumption: in this case it is possible to reduce that following some tricks:

- filtration systems for purification of the water in tank, that could optimize water changes;
- systems for the recovery of rinsing waters, by witch rinsing waters are reused for the first degreasing of dishes and their heat helps the first phase of heating;
- systems of automatic soap dosage, to control and reduce soap waste.

Page 4

The environmental impact, linked to the washing-up liquid use, could be limited by the use of soaps with a low environmental impact, as they:

- have a lower impact in the aquatic environment;
- do not contain specific both polluting and dangerous substances;
- use a reduced amount of packaging;
- explain use conditions, taking into account the environmental preservation;
- have the same efficiency of conventional products.

Page 5

Another way to attain a higher sustainability level is to choose concentrated detergents for the kitchen sanitation.

Bio detergent label (to put in)

Chapter 3: Kitchen equipment

Lesson 1: Refrigerator and oven

Page 1

Refrigerator:

- to choose only high energy efficiency refrigerator (A+; A++; A+++);
- choose a refrigerator with a good insulation;
- choose a refrigerator with the needed capacity;
- open the door only when necessary;
- freeze helping food;
- defrost periodically the refrigerator;
- control periodically seals;
- set rightly the refrigerator (for example, far from heat sources).

Page 2

Oven:

- to choose only high energy efficiency oven (A+; A++; A+++).
- It has an inside fixed-temperature and a lowest energy consumption;
- clean oven at the end of every cooking;

- open the door only when necessary.
- NOTE: when we talk about household electrical appliance washing, we give advice to use ecological soap or natural products like lemon and vinegar.

Page 3

In the public catering, an ecological oven has been introduced: an oven with air-or-steam touchline to program the food cooking.

This touchline has three intuitive ways of cooking:

- **Automatic:** it offers 8 cooking families based on different typology of food; so, when the icon is touched, it automatically sets the cooking in compliance with food type and quantity;
- **Planned:** it allows to memorize our favourite receipts;
- **Manual:** this way allows chef to choose how to manage food cooking.

Yet, this oven is ecological because it has low environmental impact and high efficiency gas burner and it has a low temperature cooking.

Lesson 2: Kitchen Utensils

Page 1

At the end another important element of the sustainable kitchen is:

Which pots do we use?

Which kitchen utensils are more ecological?

- The most ecological pots are the pressure cooker and the steamer, because they have lowest cooking temperature and keep food taste and proprieties;
- Centrifuge: it's very fast and crushes more leathery raw materials as well.
- Vegetable mill: to separate flesh from fibres.

Page 2

Other environmentally efficient utensils are the following:

- Mincer: Dividing foods in small parts, it makes cooking faster, allowing energy spare.
- Vacuum Machine allows storing already cooked foods.
- Juicers also make it easier to consume more raw produce. Some juicers of the masticating or twin gear variety perform extra functions too, such as crushing herbs and spices, and extruding pasta.

Page 3

Cleaning techniques are relevant to spare water and energy in the professional kitchen. We give some information about that.

A good solution is to frequently clean with warm water, which was dissolved baking soda and lemon. With the same mixture can successfully clean the stove top and counters as simply brush, leave a little while and then wipe with a microfiber cloth.

Page 4

If using frequently the microwave oven, you could clean it by placing inside a glass with a mixture of equal parts of water and lemon, then turning it to maximum power for a few minutes.

Then wait a little bit before removing the cup, and gave it out nice wipe the inside of the microwave with a damp micro-fiber cloth.

The refrigerator is cleaned best spray with vinegar or baking soda and then with clean water.

Page 5

To remove odours in the refrigerator, you can sprinkle baking soda in a shallow container and place it in the refrigerator. The effect is striking and very durable.

To avoid occlusion of the sink in the kitchen, do not resort to toxic chemicals: it is best if the channel is not badly blocked instead of detergent to use a packet of baking soda, and then pour half a cup of vinegar.

It is best to do a weekly prophylaxis against clogging of the channels and odors thus to forbid a serious blockage.

Test

Question 1: Which is a suitable solution to reduce energy waste in collective catering?

- Use of plastic tableware
- Periodic control of packing in oven, fridge, etc.
- Consumption of intensive agriculture foods

Question 2: How is it possible to reduce the water waste in the collective catering?

- Use of tap water
- Use of plastic bottle
- Not using dishwasher

Question 3: Which is the most important sector of a household appliance label to evaluate its sustainability?

- Sector 1
- Sector 2
- Sector 4

Question 4: Which is the latest sustainable oven?

- Microwave oven
- Airy oven
- Air-or-steam touchline oven

Question 5: Which is the more efficient trick to remove odors from refrigerators?

- Degrease it with a detergent
- Perfume the refrigerator shelves
- sprinkle baking soda in a shallow container and place it in the refrigerator

Unit 12: Minimising packaging and waste

Photograph describing the unit:

[Waste hierarchy.svg](#)

In this Unit I will learn:

- What types of waste foodservice operations generate
- How to manage waste and resources effectively
- How to minimise packaging and waste
- How to optimize reuse and recycle of waste and resources

Introduction into the topic:

The aim of Waste Management is to minimise packaging and waste and to manage waste and resources effectively. This means using material resources in a way that reduces the quantities of waste produced and, where waste is generated, to manage it in a way that minimises its impact on the environment and public health and contributes positively to economic and social development.

Waste reduction is one of the most effective low cost or no cost ways to reduce disposal fees, and green a commercial kitchen. Most waste reduction practices are just simple good business practices with the "green" designation being an added bonus. Most foodservice operation throw out a massive amount of garbage, most of which could be diverted. 75% of material in today's landfill is recyclable or compostable, while 50-70% of the weight of a foodservice operation's garbage consists of compostable food items. Food packaging makes up most of the remaining weight of the garbage's bins, but account for around 70% of the volume of foodservice trash. A foodservice operation without recycling, composting or any waste reduction program can reduce their disposal cost by at least half by implementing simple, structured practices.

A comprehensive and sustainable waste minimizing and management process includes the following steps:

Rethink – Reduce – Reuse - Recycle

Chapter 1: Rethink

Introduction:

Before planning and carrying out activities and operations for waste minimizing and management, a process of **Rethinking** is helpful. It means to develop another view on foodservice operations and to consider the impacts of waste production in order to motivate cooks and concerned staff for fundamental changes and new options for kitchens in kindergartens, schools, canteens and gastronomy.

Lesson 1: The challenge Rethink

Page 1:

In the waste management **the challenge Rethink** encourages individuals and businesses to consider the way they use goods. Rethinking your waste production is not only the action of reducing the amount of waste a foodservice operation produces, but a complete redesign of the way one uses food products and offers, if it uses them at all.

Page 2:

Rethinking waste involves looking at each and every product and person that passes through the doors or works in a facility, then changing the way they eat, work, supply or purchase natural resources.

Page 3:

Waste impacts can be viewed from three sources: upstream, downstream and direct. The upstream impact of goods and services is the amount of natural resources and human capital consumed in the production and distribution of goods purchased for your facility. These are indirect impacts that an operation will only see in the price of goods.

Lesson 2: Examples how to Rethink

Page 1:

For instance, a can of soda is just a can of soda in a cafeteria, but the single can does not show the true costs associated with its production. The upstream impacts of a can of soda includes the growing and harvesting of corn for the corn syrup, mining and smelting of aluminium, pumping and refining of oil to produce the poly lining and the worldwide distribution of each element from one facility to the next in order to create an aluminium can to be fill with liquid that will be consumed in a matter of minutes.

Page 2:

Example: Paul Hawken refers, in detail, to this soda can example in his book Natural Capitalism. After consumption of the soda, the can then becomes a direct waste your facility must deal with, or a downstream impact if the customer takes the drink away. With both upstream and downstream wastes, the costs and environmental impacts are invisible, but can still be somewhat lessened with the knowledge that these costs exist. You can serve sodas from reusable soda kegs to reduce the upstream and downstream impacts and remind customers to recycle, which highlights the lack of control with downstream wastes. The customer may choose to recycle it or throw it in the garbage destined for a millennia in the landfill, then repeat the numerous steps with their next can of soda.

Page 3:

Applicable products and practices may vary depending on type of businesses, local recycling and composting options and available storage, but all foodservice operations can and should implement some sort of waste reduction practices into their policies. Write the practices into company statements and training guides, and allow new ideas to grow from staff. Create and post recycling guides to remind staff and customers what is and is not recyclable and how to recycle each item.

Page 4:

There are literally thousands of options available to reduce waste, most of which should be structured into policy like prep pars and food rotation schedules. Others may need more legwork in order to implement successfully.

Page 5:

For a school foodservice operation, this may be going to a tray-less cafeteria, which is a new movement that has grown across college campuses. Removing the trays so students do not take too much food has reduced campus dining facility's food waste by

around 35%, saved millions of gallons of water and chemicals and cut labour costs from the reduction of dirty dishes. Rethinking the way a kitchen operates takes innovation and the will to embrace change. The results are invaluable.

Chapter 2: Excursion: What type of waste do foodservice operations generate?

Introduction:

Foodservice operations in canteens and restaurants produce waste in the following sections and processes:

Graphique Source: http://www.leanpath.com/docs/Waste_Guide_o.pdf

In the following lesson we learn more details about these types, processes and sections of waste generation and possible links for minimizing.

Lesson 1: Pre- and Post-Consumer Food Waste

Page 1:

Food Waste is generated in two periods. Pre-Consumer Food Waste is food waste discarded by staff within the control of the foodservice operator. This includes all waste in the back of the house including overproduction, trim waste, expiration, spoilage, overcooked items, and contaminated items and dropped items. It also includes all waste in the front of the house that has remained under the control and custody of the foodservice operator, including items on cafeteria stations such as salad bars, steam wells, self-serve deli stations, disordered product (e.g. erroneous grill orders never served) and expired grab & go items.

Page 2:

Leftover catering items would be pre-consumer waste if they remain on the catering line and have not been received by an individual customer. If an item has been sold or served to a customer and is then discarded it is no longer pre-consumer waste. Pre-consumer waste offers opportunities for waste reduction and cost savings.

Page 3:

Another level of Food Waste is Post-Consumer Food Waste, which is discarded by customers/guests/students/patients/visitors after the food has been sold or served. This waste is sometimes referred to as "plate waste" or "table scraps" and the decision to discard it (or leave the food on the plate) is made by the consumer rather than the foodservice operator. Post-consumer food waste can be reduced through smaller portions and awareness programs.

Lesson 2: Packaging and Supply Waste

Page 1:

Packaging Waste has two forms. Inbound supply chain waste refers to palettes, cans, cartons, plastic wrap and other materials used to package supplies and food. Packaging Waste is waste associated with packaging and serving food to guests. Regarding wasted items are clam shells, hot and cold cups and disposable trays.

Page 2:

While operating supplies again generates two waste areas. Front of the house operating supply waste can include napkins, disposable cutlery, portion controlled condiments and table linens. Back of the house operating supply waste can include towels and rags, expired seasoning and paper.

Chapter 3: Reduce

Introduction

Source reduction is the most powerful and effective thing we can do to manage waste. By designing systems and policies to prevent, minimize or avoid waste in the first place, we have an opportunity to save food and labour dollars while making the largest positive impact on the environment. When we prevent waste, we aren't spending money on raw materials that would otherwise go in the garbage. At the same time, we're saving money on labour costs associated with handling or processing these materials. We're also avoiding hauling and landfill fees (and carbon emissions) associated with recycling, composting or disposing of the waste.

Lesson 1: Steps to Waste Reduction

Page 1:

The first step in reducing the amount of waste a restaurant produces is to conduct a waste audit. Waste audits allow you to physically see what waste is being produced in your facility. It is a somewhat unpleasant experience, but a very valuable tool in reducing waste. A waste audit "how to" is provided here.

Page 2:

Once you have completed a waste audit, consider your current practices and how they are affecting your garbage. What is being thrown in the trash? Is it recyclable or compostable? Was it incorrectly dated and went bad? Burnt? Over portioned? What are you doing right? What are you doing wrong?

Page 3:

Is your training of staff or the layout of the facility and recycling / compost / trash bins affecting what materials wind up in the trash? Recycling should be an easier task than throwing something away. Are there enough recycling bins? Every garbage can should be accompanied by a recycling and or compost bin and can often be smaller than the recycling bins. In areas like offices, there may not even be a need for a trash bin. The large majority of waste from an office consists of recyclable paper.

Page 4:

Training is an essential part of a successful waste reduction program. Recycling does not come naturally for many people and may even have cultural hurdles. Integrate waste reduction into all training programs and materials, and provide detailed intuitive materials to all staff in all needed languages. Pictorial recycling guides are a very helpful document to laminate and hang above all recycling areas. More about staff training can be found [here](#).

Page 5:

After you have changed and improved your current practices, implement new programs. This could be composting, on-site worm bins, recycling of additional products or replacing plastic disposable goods with durable or compostable options. When

implementing new programs, start slowly with one program and be ready and willing to make changes in your daily operations or how you implement the program.

Lesson 2: Examples for Waste Reduction

Page 1:

Examples for good practice:

Buy appropriate food amounts. Buying too much food leads to excessive waste from spoilage. Buying too little means you have to arrange extra deliveries which cost more money and require more gas to power the delivery truck.

Page 2:

Rotate food stock. Follow the first-in-first-out method when taking on new food product. Place newer items behind older, so the older food items are used first.

Provide smaller portions. If plates are repeatedly returned with only a portion of the food eaten, then you are serving too much. Cut back to reduce the amount of food waste.

Serve tap water. Bottled water is an expensive waste of resources. Filtered tap water is just as tasty as bottled water; plus tap water costs next to nothing.

Page 3:

Serve draft beer. Serving draft beer reduces the amount of beer bottles and cans that need to be sorted.

Use beverage concentrates. Buying soda concentrate and using a beverage gun reduces the amount of cans and bottles that need to be recycled.

Dispense condiments in bulk. Use pourers for sugar, creamers for cream and bulk condiment dispensers for ketchup and mustard rather than individual, wasteful, packets.

Mix cleaning chemicals correctly. Hundreds of gallons of concentrated cleaning chemicals are wasted every day because they are not properly diluted. Read the labels and mix appropriately to decrease waste.

Chapter 4: Reuse

Introduction:

Reuse is next best option after source reduction. With reuse, you find a secondary way to obtain value from an item that would otherwise be wasted. In foodservice, the most common reuse opportunities involve:

Redeploying overproduced food elsewhere on the menu (provided you comply strictly with food safety guidelines) and donating to a food recovery program that will provide it to those in need. In certain jurisdictions, food can also be donated to feed animals provided it is handled and treated correctly.

Lesson 1: Steps to Reuse

Page 1:

The first and most important reuse option in foodservice is food donation. Many organizations are eager to accept all sorts of donations including old wares and equipment. The donations go to a great cause, and are usually tax deductible to boot.

Page 2:

Equipment repair is an option that is beneficial in many situations, but not always the best choice. Old equipment may have a little life left in it, but new equipment is often more efficient. Energy Star rated equipment often save enough energy that buying new is usually the best option. The Tools link provides several lifecycle calculators that compare the savings of new energy efficient equipment versus old, standard units.

Page 3:

Routinely maintaining equipment is also very important so that you are not forced to choice whether or not to buy new equipment. Find more information on equipment maintenance under the equipment section in unit 11.

Page 4:

Then there is the coffee cup issue. Americans use an estimated 43 million disposable coffee cups every day. Disposable cups are not recyclable and the vast majority is not compostable either. Encourage your guests to bring their own cup with discounts and prohibit staff from using disposable cups at all. Disposable vs. reusable wares is a highly debated issue with many variables to look at.

Page 5:

In general, durable wares are a more environmental option unless there is a commercial composting facility available. Even then, the environmental impact is debatable because of all the resources used in the manufacturing of the compostable goods. If you do choose to use compostable products, make sure the Biodegradable Products Institute certifies them as truly compostable.

Lesson 2: Examples for Reuse

Page 1:

Examples for good practice:

Buy recycled. Look for paper products and other items that are made from recycled materials to close the recycling loop.

Page 2:

Offer discounts. Reward customers who bring their own ceramic coffee mugs with a discounted price. This will facilitate customer loyalty while helping the environment.

Buy reusable flatware and dinnerware. Though disposables are convenient in some instances, many will eventually end up in a landfill. Reusable dinnerware and flatware can last a lifetime if properly used and maintained.

Page 4:

Donate extra food to a food bank. Not only does this increase your public image, it helps feed the growing number of homeless and hungry.

Clean with cloth. Cloth cleaning rags can be laundered and reused whereas paper towels just end up in a landfill.

Page 6:

Send packaging back. Many suppliers will reuse or recycle cardboard boxes, pallets and food crates.

See more information [here](#).

Chapter 5: Recycling

Introduction:

Recycling and composting is the final good option prior to disposal. By recycling or composting, you divert the waste from the landfill or elsewhere in the solid waste stream and ensure ongoing value when the item is converted into something useful, such as a soil amendment with composting.

Lesson 1: Steps to Recycling

Page 1:

Canteens and restaurants create large portions of food to serve many people. With this large amount of production comes a lot of waste, and waste costs money, both in uneaten or spoiled food and trash handling fees. Along with the environmental benefits, there are several other reasons for canteens and restaurant to engage in a recycling program.

Page 2:

Recycling is good for business: Customers take notice of and appreciate a canteen's or restaurant's efforts to reduce environmental strain, leading to a better public image. This can increase customer loyalty and spur customer involvement.

Cheaper trash fees: The fewer times the dumpster needs to be emptied, the less you will have to pay for trash pickup.

Page 3:

Reduced purchasing cost: Canteens and restaurants with an effective recycling system will have several in-house reusable items, like cloth cleaning rags and reusable flatware. This will reduce the amount of new products that need to be purchased.

Avoid extra costs: In some countries, recyclable materials, like cardboard and newspaper, are banned from landfills. Additional disposal fees are charged to anyone that wants to put recyclable material in a landfill.

Page 4:

Recycling varies across countries as to what is collected and how it is collected so contact your local waste management or waste hauler on details for recycling in your area. They should be able to direct you to drop-off sites that collect materials that are not collected through curb side recycling.

Page 5:

Many items can be recycled besides the standard paper, metal, plastic and glass. Plastic wrap used to protect linens and disposable items can be recycled at some facilities or anywhere that accepts grocery bags. Shipping companies will take your Styrofoam peanuts and schools may take your bottle caps for art projects. Be creative and willing to make a few calls. Other recyclable items include corks via recork.org, candle wax, wood,

construction debris and old or broken utensils and kitchen ware made from at least 75% metal.

Page 6:

At a minimum, all foodservice operations should recycle fryer oil and materials that are toxic such as fluorescent lights, old thermostats, batteries, unused chemicals, paints and miscellaneous hazardous materials. Again, contact your local waste management department for information on hazardous material collection.

Many municipalities have also implemented electronic recycling programs along with national programs from a variety of electronics companies. Much more information regarding electronics recycling is in the Office section of this web site.

Page 7:

The final step in waste reduction and recycling is to 'close the loop' by purchasing products made with recycled content. Most foodservice paper products, office goods and many building materials have recycled content options. Recycled products require less energy and produce less green house gases when they are remanufactured into new goods as compared to virgin material. Recycled goods also add value to the products you recycle. Demand for recycled products creates a demand for recyclable material, which in turn opens up the potential for greater recycling in a wider area of the country.

Page 8:

Set purchasing policies for buying goods with recycled content such as napkins, paper towels and all other food related paper goods must contain 35% post-consumer recycled material AND office goods made with 100% post-consumer material. Written policies will help ensure that these products are used in an organization regardless of who is doing the purchasing.

Lesson 2: Examples for Recycling

Page 1:

Examples for good practice: Recyclable materials

Aluminium: Nearly everything aluminium can be made from recycled aluminium.

Recycling just one ton of aluminium cans saves the energy equivalent of 1,665 gallons of gasoline.

Page 2:

Food Waste: As much as 70% of all restaurant waste is food waste. Food waste can be composted to create a nutrient rich soil additive. Farms, greenhouses, even home gardens can benefit from composted food waste.

Cardboard: Old cardboard boxes can be donated to charities for reuse or sent to a recycling facility to make new cardboard and other paper products. Recycling one ton of cardboard saves 460 gallons of oil.

Page 3:

Glass: Glass can be reused an infinite number of times. Anything made of glass can be recycled into new glass products. Recycling a single glass bottle saves enough energy to power a 100W light bulb for four hours.

Paper: All non-glossy paper can be recycled into several products including newspaper, bathroom tissue and kitty litter. Every ton of paper recycled saves energy equivalent to 185 gallons of gasoline.

Page 4:

Plastic: Recycled plastic can be used to create several products ranging from mop heads to t-shirts. Five two-litre recycled bottles can produce enough insulation for a men's ski jacket.

Steel: Recycled steel can be made into steel cans, building supplies and tools. Steel recycling in the USA saves enough energy in one year to power 18 million homes for that entire year.

Used fryer oil: Fryer oil can be turned into biodiesel, a popular alternative fuel. Rather than paying to have your oil taken away, biodiesel companies are actually paying restaurants for this resource.

Lesson 3: More suggestions for reducing waste upstream, direct and downstream

Page 1:

- Talk to your suppliers about using reusable packing. Tell them you would prefer to receive items like new tongs, for instance, in a milk crate rather than a cardboard box. Smaller, local farmers and suppliers are often more interested and structured to work with reusable packing for food packaging compared to large distributors.
 - Develop a composting program, example [here](#).
 - Develop a comprehensive recycling program if there is not one already in place
- Call around and find recycling or reuse option for miscellaneous items

Page 2:

- Bottles and cans are not the only things that can be recycled. Old cracked hotel pans, broken tongs and anything made of at least 75% metal can usually be put in the metal recycling bin. Contact your local recycler to confirm that they can accept these items.
- Use compostable products for items that are normally discarded in-house such as straws, stir sticks and drink skewers, then compost them
- Find products that come in less packaging, and also more recyclable packaging
- Use reusable options with everything possible. Coffee filters, coffee cups, drink coasters, etcetera
- Replace bottled beers with keg beer and bottled or canned soda with bag-in-box syrups or 5 litre pre-mixed soda kegs. Most people will tell you the premix tastes better, but they are getting harder to find.

Page 3:

- Develop a relationship with a food donation program in your area
- Donate old tableware, kitchen utensils and equipment to a church, school or soup kitchen
- Buy in bulk - while this is standard operation for most foodservice facilities, consider all the products not normally taken into account for bulk purchases such as alcohol and cooking wine.
- Discontinue use of any non-essential products like paper place mats, frilly toothpicks and practices like putting two straws in cocktails

- Have staff distribute disposable items like napkins and plastic forks rather than placing them in self-serve stations.
- Use napkin dispensers that dispense one napkin at a time

Page 4:

- Invest in nice wood tables rather than using linens or other table covers. This small upfront cost saves thousands of dollars in linen services every year.
- Buy cleaning chemicals in concentrated form and reduce the number of chemicals on site by using multi-purpose cleaners
- Have employees use reusable cups for their own drinks
- If applicable, charge a deposit and allow neighbouring workers to take plates and utensils back to their offices
- Reduce the amount of excessive takeout packaging - a sandwich wrapped in paper inside a paper bag worked just fine up until the 80's, it can work again

Page 5:

In quick serve operations where the customer is disposing of waste, make obvious, easy to understand labels on each bin for "bottles," "cans," "plates and silverware" and "garbage only." Because some people see everything as garbage - even your reusable silverware, labels may need to be more specific to identify waste like "paper cups and wrappers only." Also, make the garbage can opening small so guests do not just dump their entire contents in the garbage. Better yet, use a bus tub for garbage so staff can remove any silverware or recyclables thrown into the "garbage only" container.

Be inspired: Real life story – example from your country (*if available, at least 1 in one module*)

- One example from gastronomy sector
- One example from public catering sector

Test:

Question 1: Why is **Rethink** about waste management a challenge for food operators?

- Answer: It deflects the manager from more important tasks for business.
- Answer: It prevents a manager from direct activities for waste management.
- Answer: It is a waste of time and resources.
- Answer: It requires an excellent knowledge about waste management.
- Answer: It requires a complete redesign of the way one uses food products and offers.

Question 2: What is an essential part of a successful waste reduction program?

- Answer: An excellent knowledge about reduction technologies.
- Answer: A training program for the staff on waste reduction.
- Answer: Good contacts to the Biodegradable Products Institute.
- Answer: Cooperation with provider of disposable dishes and cups.
- Answer: A high budget for reduction activities.

Question 3: What is the most important reuse option in foodservice

- Answer: Delivering of overproduced food to animal food industry.
- Answer: Convince your suppliers about using reusable packing.

- Answer: Reward customers who bring their own ceramic coffee mugs with a discounted price.
- Answer: Providing of overproduced food to a food donation organisation
- Answer: Send packaging back to suppliers.

Question 4: What is the most important advantage of recycling?

- Answer: Good contacts to recycling business.
- Answer: Reducing of purchasing, packaging and other costs
- Answer: Awarding by local authorities and public administration
- Answer: Diverting waste from the landfill.
- Answer: Less time for staff spending on garbage.

Question 5: What kind of waste makes 70% of all restaurant waste?

- Answer: Packaging
- Answer: Bottles and cans
- Answer: Disposable flatware and dinnerware
- Answer: Equipment
- Answer: Food waste

Module 5 - Communicate and motivate for positive change

Photograph describing the topic

Unit 13 - Presentation, setting and customer relationship

To provide learners with knowledge and skills to best present their food, enable them to effectively engage customers in the sustainability aspects of their meals and provide guests with most enjoyable dining experience.

Unit 14 - Developing a culture of sustainability and excellence

To introduce the concept of a culture of sustainability and excellence and how to achieve it in a kitchen setting through effective team building, participatory management, employee motivation and continuous professional development.

Unit 15 - Marketing and communications

To help learners plan and execute communication activities to promote their healthy and sustainable food offering, including a range of practical real-life examples of successful promotional activities in a range of settings.

After Finishing this Module I will have learnt:

- How to present the restaurant's offer, how to effectively engage customers in the sustainability aspects of their meals and how to provide guests with the most enjoyable dining experience.
- What is the concept of sustainability and how to achieve it in a kitchen setting through effective team building, participatory management, employee motivation and continuous professional development.

- How to plan and execute communication activities to promote the healthy and sustainable food offer.

Unit 13: Presentation, setting and customer relationship

Photograph describing the unit

In this Unit I will learn how to:

- Present the restaurant's offer to guests.
- Effectively engage customers in the sustainability aspects of their meals.
- Provide guests with most enjoyable dining experience.

Introduction into the topic:

Creating and nurturing a strong relationship with your customers is the key to the ongoing success of a business. A strong customer relationship not only means that the client is likely to keep doing business with the provider over the long-term, it also means that the chances of that customer recommending the company and its products to others are greatly enhanced.

Chapter 1 – Create a strong relationship with your customers

Creating and nurturing a strong relationship with your customers is the key to the ongoing success of a hospitality business. A strong customer relationship not only means that the guest is likely to keep coming back, it also means that the chances of that customer recommending the restaurant and its products to others are greatly enhanced.

Lesson 1: Steps to strong relationship

Page 1

Identify customer needs

This is accomplished by interacting with the guests from the moment they enter the restaurant, by a welcoming personnel, as well as during their meal ordering and serving by the waiting staff.

Page 2

Actively seek customer feedback

This includes seeking suggestions on new services that would be of interest to the customer, as well as critiques of current aspects of the service. Always listen carefully and respond in a manner that lets the guest know you understand the suggestions or critiques that have been given. Thank the client even if the comments are negative.

Page 3

Avoid arguing with a guest

Even if the customer is arguing under a false assumption or incomplete information, adopt the customer's perspective and acknowledge that you understand what the client is conveying. Repeat the key points and ask if you have grasped the details properly. Then set a specific time to get back to the guest with answers.

Page 4

Use the customer's name in all types of communication

The greeting should always reflect the preferences of the customer. This means that if the customer prefers to be addressed with the use of a title and a surname, that is the approach to take. Only use first names if the customer has given you permission to do so.

Lesson 2: Further steps to strong relationship

Page 1

Be honest with the customer at all times.

Attempts to earn trust by making commitments that cannot be kept will only hurt the customer relationship. As the customer grows to trust your honesty and integrity, the relationship will deepen over time, and be of great value to everyone concerned.

Page 2

Promise less, do more

Under-sell and over-deliver should be the mantra for every successful restaurateur. He should be attentive and passionate about customer needs. If you satisfy a customer's needs, you are building the foundations on which to establish a relationship based on trust and loyalty. All these factors collectively contribute to customer loyalty and retention which are paramount to success in the hospitality industry.

Page 3

Give value

If a customer strongly believes he is getting value for the money he is paying, he will keep coming back. On the contrary, dissatisfaction with your customer service will make him turn back and look for value offers from your competition.

Page 4

Tip:

A solid customer relationship can make it easier to get through occasional breakdowns in service and eventually overcome hardships. An open line of communication will do much to keep the relationship strong and to identify the origin of an issue and lead to a resolution that the client will find equitable.

Repairing a damaged customer relationship can be a difficult task, but it can be done.

Chapter 2 – Excellent customer service

Excellent [customer service](#) is service that makes your customers feel special. Service that makes them want to come back and recommend your restaurant to their friends.

Lesson 1: Plan for excellent customer service, part 1

So how can you provide the kind of customer service that will dazzle customers and competitors alike? Follow this plan:

Page 1

Determine what makes your offer special. Study the competition. Think about your competitors' customer service and the customer service you provide. What can you offer your customers that is "better" than the competition? There are sure to be aspects of your customer service that you can promote as special or unique.

Page 2

Study the customer service ideas on your list and examine their feasibility.

Can you really guarantee that you will always provide a service better than your competitors? If you are not sure, or cannot do it, cross it off. Excellent customer service carries that same kind of guarantee; it's not a "sometimes" proposition. So only choose what you can definitely do one hundred percent of the time.

Page 3

Choose one or two of your excellent customer service ideas and put them into practice. When you implement your customer service ideas, you don't just simply do it, you also need to let people know that you are doing it. Feature this aspect of your customer service in whatever communication you do.

While one of the big payoffs of your excellent customer service will be the great word-of-mouth advertising it generates, this takes time, and you need to help it along by getting the word out. Don't be shy!

Lesson 2: Plan for excellent customer service, part 2

Page 1

Stay proactive and keep gathering customer service ideas

You will not achieve success by doing the same thing for ever, or by simply reacting to customer complaints.

Listen to your customers and find out what kind of special customer service they want. You can do this formally, by creating a customer service feedback form, that you enclose with every bill or post on your website, or informally, by asking them for their customer service ideas when they're leaving your restaurant.

Page 2

Offer convenience

The hospitality industry thrives on convenience. If your customer service is missing this essential ingredient, your business won't last long unless you bring about changes that demonstrate your commitment to customer satisfaction.

Page 3

Handle customer complaints

No matter how hard you try, things are bound to go wrong once in a while. Food gets burned, orders are forgotten in the middle of a dinner rush, or new servers simply forget all their training. No matter the reason for the complaint, the important thing is to try and please the customer. You should acknowledge that yes, there was a problem, but it is not what they should expect from your restaurant. Read on for tips on [how to handle common customer complaints](#).

You can see a great example of excellent customer service by the Ritz-Carlton hotel in [this article](#).

Chapter 3 - Engage customers in the sustainability aspects of their meals

Most consumers today prefer to dine at an environmentally-friendly restaurant if given the choice. But the potential to confuse consumers with misleading green claims is high. Green issues are highly technical, complex and fast moving. When claims are unclear, restaurant owners can be labelled as green washers and their marketing as not trustworthy.

Lesson 1: Tell customers about your sustainability efforts

Page 1

Going green can be one of the smartest operational decisions you can make for your restaurant, as it not only reduces consumption and draws environmentally-conscious customers, but actually saves money for your operation in the long run. Making earth-friendly changes in your operation requires a great effort on your part, but that effort is crucial to gaining the allegiance of your guests.

Page 2

By making environmentally-friendly changes, restaurants demonstrate their commitment to the environment and can strengthen their relationships with their customers and employees.

For example, restaurants that are taking steps to improve their environmental sustainability can inform their guests of their increasing efforts. These efforts and customer education can differentiate one restaurant from its competition.

Page 3

In addition, restaurant employees are often the biggest supporters of an employer's efforts in sustainability. Make sure your employees are knowledgeable about all your green efforts and have the information and skills to communicate it to your guests.

Lesson 2: Make sustainability part of your business culture

In order to publicise your ongoing commitment to sustainability, try adding the following three suggestions into your business schedule:

Page 1

1. Communicate your efforts.

One of the benefits of implementing sustainable practices throughout your establishment is the opportunity to share your efforts with customers and employees. Be transparent in your message and highlight what you have implemented, areas where you have difficulties, and how you are addressing these issues.

Page 2

2. Get involved with local environmental projects and programs.

By supporting local environmental efforts, you can make your restaurant's commitment to sustainability visible to the community. You can do this by donating food /meals to fundraising events and/or to local hunger relief agencies, collecting guest donations, or hosting events to discuss sustainability causes.

Page 3

3. Involve and engage your employees.

Creating a “Green Team” to help coordinate your sustainability efforts is an easy way to get your employees involved with the decision-making process and boost spirits. You can utilize your “Green Team” to help identify areas of opportunity, provide suggestions for future efforts, or train other staff members on green policies and procedures.

Page 4

Tips:

Four Keys to Sustainability

1. Embrace the local community and its flavours.
2. Do not overuse certain food sources, like seafood.
3. Be socially responsible, but be profitable.
4. Choose one topic/theme a year and stick to it.

How to Be Socially Responsible

1. Give consideration to efforts that align with your business model.
2. Don't just give back; create value.
3. Become a force for positive social change.
4. Make sure your philanthropy is relevant.

Chapter 4 – Train your staff

The first step to great customer service is your restaurant staff. Train them yourself or hire someone to that effect.

Lesson 1: Some advice for staff training

Page 1

A well trained staff will keep customers happy and coming back for more. Not just anyone can wait tables or tend bars. Good waiting staff are among the most talented people out there. They are friendly, but not annoying. They can multitask, but still give customers their undivided attention. And they are honest, trustworthy and can work as a team.

Page 2

First establish clear guidelines about what is expected from your employees. This is where an [employee handbook](#) is helpful. A good restaurant employee manual outlines all your expectations for job performance as well as job descriptions, safety procedures and any other communication you want to convey. If there is ever a dispute with an employee, about policies, behaviour, etc., you can pull out your employee manual for the correct answer.

Page 3

Next, have clear expectations about what is good customer service. There is the basic stuff: smile, make eye contact, be polite. There may be other steps you would like your staff to follow, depending on your restaurant concept. Maybe you are a family friendly

restaurant. Train your staff to treat children like regular customers, to ensure they (and therefore their parents) have a good dining experience.

Page 4

Train your staff to be always helpful, courteous, and knowledgeable.

Talk to them regularly about good customer service and what it is (and isn't). Most importantly, give every member of your staff enough information and power to make those small customer-pleasing decisions, so he never has to say, "I don't know, but so-and-so will be back at..."

Page 5

Encourage your waiting staff to anticipate customer needs, rather than wait to be asked for something. If a customer has a reasonable request about their meal, always try to accommodate it. If you can't, offer an alternative. The point is to show them that you care about their dining experience, and you want to make them happy. Not only does the customer feel taken care of, but small steps like these can help staff up sell, increasing check averages and tips.

Lesson 2: How to implement the topic to the everyday life of my restaurant

Page 1

There are many small, inexpensive (and often free) ways to show your customers how much you appreciate their business. Of course, great food and service is paramount for successful customer appreciation; however, personal attention, especially by the owner or manager can go a long way in making customers feel appreciated. Read on for tips on how to make every customer feel like they are a VIP.

Page 2

Personal Attention

Don't be afraid to go up to tables and introduce yourself and ask how their meal is. Customers will feel very special that the owner took the time to check on them. You don't need to have a lengthy conversation with each table. Just give a brief introduction and tell the customer if they have any problems, to let you know.

Page 3

Address problems immediately

Don't shy away from them. Instead, acknowledge the problem and offer some type of solution, whether it is a rain check for running out of dessert or a free round of drinks because the service was slow.

Page 4

Tips for more information:

Link to an interesting article: [How Four Seasons And Ritz-Carlton Empower Employees And Uphold Customer Service Standards](#)

Be inspired: Real life story – example from your country

- One example from gastronomy sector
- One example from public catering sector

Test:

Question 1: What steps are important to create strong customer relationship?

- Answer: Always use customer's first name.
- Answer: Identify customer needs and actively seek their feedback, be honest and give them real value.
- Answer: Give customers something for free.

Question 2: What needs to be done to create excellent customer service?

- Answer: Put into practice excellent customer service ideas.
- Answer: Keep gathering new ideas for great service.
- Answer: Proactively handle customer complaints and always offer convenience.
- Answer: All of the above.

Question 3: How to best engage customers in the sustainability aspects of your business?

- Answer: Communicate your efforts to your customers.
- Answer: Train and engage your staff to communicate your efforts to customers.
- Answer: Get involved with local environmental projects and programs.
- Answer: All of the above.

Question 4: A good restaurant employee manual outlines:

- Answer: Expectations for job performance, job descriptions, safety procedures, how to handle problems.
- Answer: Employee's salary.
- Answer: Ways how to promote the company to customers.

Question 5: What do you think are examples of good customer service?

- Answer: Be always helpful, courteous, and knowledgeable about customer needs.
- Answer: Always handle any problem proactively and try to solve it to customer's satisfaction.
- Answer: Smile, make eye contact, be polite.

Answer: All of the above.

Unit 14: Developing a culture of sustainability and excellence

Photograph describing the unit

In this Unit I will learn:

1. What is our personal definition of sustainability?
2. What do we mean by a "culture of sustainability and excellence"?
3. How to achieve it in a kitchen setting through effective team building, participatory management, employee motivation and continuous professional development.

Introduction into the topic:

A powerful way to create a breakthrough in organisational effectiveness is to design and work in a culture of excellence. A "culture of excellence" is, by definition, out of the ordinary. Creating such a culture requires a vision of what is possible, a plan to set it in motion, and practice to generate it on an ongoing basis. Once made the decision to achieve and sustain such a culture, we need like-minded people - the company's workers. Employees are one of the most important resources of the restaurant, but it will not be fully used if management does not consider and seek appropriate incentives to motivate them. Good managers make a priority of human resources management in their restaurants.

In this section you will find out what sustainability means to your company, the road towards developing a culture of excellence and sustainability and the importance of participative management.

Chapter 1 - What does sustainability mean for your organisation?

Lesson 1: Sustainability issues

Page 1

Professional gastronomy is subject to specific economic, legal, social and organisational requirements and constraints, which have to be taken into account when implementing "sustainable cuisine". Achieving sustainability in professional cooking implies a long-term commitment to continuous improvement. Goal-achievement has to be evaluated, monitored and communicated to the stakeholder community.

Page 2

Before answering the topic's question, let us recall that sustainability has three dimensions: environmental, economic and social, to which we added a fourth dimension in Module 1: health. (link to Module 1). These dimensions are interrelated, for instance, measures to protect the environment such as reducing pollution emissions also have positive consequences on our health. These impacts are much easier to identify than to measure. This is why it is important that you evaluate, at your level, your organisation's contribution to these pillars and the in-house changes it requires.

Page 3

Sustainability does not have a set definition. Specifically when used in business, the term is either:

- **Weak sustainability:** an expansion over the financial bottom line where the business considers environmental and social sustainability as well. Many people refer to this as the triple bottom line. Other times, the term is used simply for environmental responsibility.
- **Strong sustainability:** a whole new approach to doing business, where every consideration taken in the business contributes towards the advent of a sustainable society.

Page 4

Sustainability in gastronomy is not just about adapting to a new food culture and to changing diets. It is about preserving good quality produce and adapting to the availability of certain produce at a given time.

Lesson 2: Principles of Sustainability

Page 1

Principles of Sustainability /[source](#)/:

- Celebrate the joys of local, seasonal and artisanal ingredients.
- Understand the origin of the ingredients — the way they have been grown, raised or caught.
- Support sustainable agriculture and aquaculture, humane animal husbandry practices and well-managed fisheries.

Page 2

- Purchase from purveyors whose conservation practices lessen our impact on the environment.
- Choosing sustainable food products is about more than helping the environment. It's about sustaining the heritage and the economy of whole communities. Respecting local economies, traditions and habitats all contribute to a sustainable food system.

Lesson 3: Some sustainability myths

Page 1

Sustainability is about being an environmental activist or about philanthropy and I can't afford to give away all the profit of my business;

Reality is that a company has far greater resources to tap for the sake of social good than its earnings before income tax. Philanthropy can be an effective component of the sustainability puzzle, but it is just one piece. First and foremost, it is about understanding that a sustainable kitchen guarantees a person's right to healthy and sustainable food. "Cooks can change the world" (module 1, unit 3) explains the role of the cook in driving positive change towards a sustainable food system.

Page 2

The sustainable option is going to be more expensive than the alternatives;

Reality is that many sustainability measures are cost-effective even on the short term and on the long term they prove to be responsible business decisions. In the food business, cost-cutting options relate to the reduction in the overall energy and resource use (link to module 4, Unit 9 & 10); employee engagement and good customer service often cost nothing (module 5, unit 13& 14); use of local and seasonal products is generally cheaper (link to module 1& 3).

Sustainability is ultimately about making more efficient use of resources, and cutting waste not only for the good of the earth and society, but also for the viability of your business.

Link to module 2 (Unit 6) and module 3 (Unit 9)

Page 3

Sustainability is about re-cycling materials, therefore other than installing recycling bins into our offices, sustainability doesn't affect my business;

Reality is that sustainability is ultimately about 'adding value' to your businesses with people, planet and good business decisions in mind. Think before you buy and avoid unnecessary/highly polluting packaging. Think before you throw away and privilege composting and reuse (oils, utensils etc...). Link to [10 Easy Steps for a More Sustainable Kitchen](#)

Link to module 4

Page 4

If we use green-coloured packaging and the words 'eco' or 'organic' in our product, then we can sell our product as being 'green';

Reality is that if you don't have anything substantially environmentally or socially responsible to say, don't bother trying to greenwash. A good idea is to explain your philosophy in a few words and put it in a visible place (website; menu etc.). For example: We use only high quality, mainly regional, seasonal and organic ingredients. When choosing our suppliers, we pay careful attention to sustainability, recycling and life cycle assessments. We focus on long-term partnerships with small, regionally based providers, protect the environment by limiting transport and can guarantee real fresh products. In addition, we offer all of our employees a fair contract and the chance, regardless of their origin, to bring their individual strengths and grow with us. Here every guest can come carefree and enjoy a meal to his taste ([restaurant yamm! In Vienna](#)).

Page 5

We are already doing as much as we can in our business, but it is not making a difference to the sales;

Reality is that marketing is the key (link to module 5, Unit 3). Informing customers about your sustainable initiatives will help you to differentiate yourself and attract more customers.

When it comes to reassuring consumers about sustainability performance there are three options: using a certification, making the information readily available for those who want to find it and taking action demonstrating that sustainability issues are being tackled (SRA).

Page 6

Sustainability seems so complex and hard to measure, how can we hope to implement it?

Reality is that it is easier to develop a non-financial measure for sustainability by putting the results up against the four pillars. (link to module 1, Unit 2). Identifying sustainability impacts in the gastronomy business is not an easy job. However international good practice and standards may help you to work out your key impacts (for example, Global Reporting Initiative).

Links to the book “Sustainable business/ Sustainable business practice”:

http://en.wikibooks.org/wiki/Sustainable_Business/Sustainable_business_practice

Lesson 4: How to implement sustainability in your organisation?

Page 1

Of course it's not enough to only discuss the concept of sustainability in your organisation. It's equally important to act. In the cookbook “The Sustainable Kitchen” the following recommendations are given:

- Cook seasonally; do not buy fruits and vegetables out of season (Module 1, Unit 3; Module 3, Unit 7).
- Always buy locally whenever possible and buy directly from the farmer or from a source as close as possible (Module 1 & Module 3)
- Join a Community Supported Agriculture scheme or work with a local farmer who will supply you with seasonal produce of your choosing (Module 3)
- Support farmers' markets and farm stands.
- The next time you are in your supermarket talk to the produce manager. Tell the manager of your concern about pesticides and let him or her know you would prefer to buy local or regional produce and certified organic food if possible.
- Ask your grocers and suppliers about the farms where the meat and poultry they sell is raised and how it is raised. If they do not know, ask them to find out. Support grocers and butchers who get their supplies from farmers who do not use factory-farming techniques (Module 1 & Module 3).

Page 2

- Ask how the fish you buy is caught, either by using sustainable practices or by practices damaging to the environment and whether it is wild or farm raised (Module 3).
- Learn which fish species are endangered from over-fishing.
- Read labels; find out what ingredients or additives are in the food you are eating (Module 3).

- Set up your own garden and/or help set up a school or community garden.
- Complete the cycle by composting and recycling (Module 1).
- Learn about food, understand the issues, and let your legislators know how you feel about food management issues and which rules and regulations are important to you.

Page 3

And finally ask yourself what sustainability means to you and your organisation. Hope you have an answer!

Tip: [Increase carbon savings without compromising on quality](#) (link to module 4)

Chapter 2: The philosophy of the culture of sustainability and excellence – a key to your success. **change the title??**

By a “culture of excellence” it is usually meant an organisation-wide way of thinking and working that leads to a sense of “aliveness” in each and everyone. A culture of excellence is a conspiracy to excel, a commitment to be excellent. “Excellence” is way of being and thinking rather than a destination. Excellence is never handled. It requires ongoing invention and creation. Working daily to “be excellent” has an impact on how people interact with each other, on how the work is carried out, and on their sense of personal satisfaction. A culture of excellence is not a set of rules to follow. Instead, a culture of excellence is a choice, derived and manifested as a commitment to go beyond the ordinary. It requires recognising the importance of each individual and a willingness to step outside our “comfort zones.”

Lesson 1 Culture of excellence as an environment

Page 1

Fundamentally, a culture of excellence is based in an organisation-wide sense of striving rather than settling, and of enjoying the journey. It’s an environment where people are called upon to help each other and to contribute to the success of the organisation. There is a team-spirit, a sense of ownership and of being a stakeholder.

Page 2

The factors that promote such an environment include:

- Shared vision, goals and practices
- Commitment to excellence in fulfilment of the vision and mission
- Mutual support among the staff for each other’s success
- Clearly stated principles and agreements for working together
- Encouragement of innovation and creativity
- Emphasis on communication up and down the line
- Emphasis on training and development of staff
- Individual performance objectives set jointly by management and staff
- Commitment-based communications and interactions.

Page 3

One aspect that distinguishes a culture of excellence from another kind of culture is management philosophy. The focus is more on managing commitments, goals and results than on managing process or personalities. There are high standards of performance at all levels and people are held to account for meeting them.

A culture of excellence emphasizes standards and results/outcomes, as well as staff development, self-expression, contribution and satisfaction. Managers find the right spot for the right person. The work environment brings out the best in people. Employees strive for their personal best. Mediocrity is not tolerated.

Lesson 2: Why design a culture of excellence?

Page 1

We cannot give you an answer, because it is hidden in your organisation (restaurant). But here are some suggestions: “In a designed culture, we are more likely to generate cohesion and unity among our entire staff. In turn, this experience allows the staff to form and reform into different teams without significant interim delays and to work with heightened velocity and satisfaction to get the job done” or “Companies that have cultivated their individual identities by shaping values, making heroes, spelling out rites and rituals and acknowledging the cultural network have an edge.” or maybe “We are what we repeatedly do. Excellence, then, is not an act, but a habit (Aristotle)”.

Lesson 3: What are the requirements for inventing a culture of excellence?

Page 1

1. Be willing to change
2. Make It a Priority
3. Involve Everyone
4. Apply Excellence to Every Part of Your Organisation.

Page 2

What is business sustainability? Business sustainability means managing the ‘triple bottom line’— including financial, social, and environmental risks, obligations and opportunities. Sustainable businesses are resilient and create economic value, healthy ecosystems and strong communities. Sustainable businesses survive over the long term because they are intimately connected to healthy economic, social and environmental systems. Sustainability has become an increasingly important part of doing business.

Page 3

Organisational culture of sustainability - It is a culture in which organisational members hold shared assumptions and beliefs about the importance of balancing economic efficiency, social equity and environmental accountability. Organisations with strong cultures of sustainability strive to support a healthy environment and improve the lives of others while operating successfully over the long term.

Lesson 4: Basic guidelines on how to develop a culture of sustainability and excellence

Page 1

Developing a culture of sustainability and excellence is based on the following:

- create an environment in which employees have an impact on the decisions and actions that affect their jobs;
- build team effectiveness, team communication and problem solving;
- develop reward and recognition systems;
- share gains made through employee involvement efforts;
- know participatory management and establish feedback groups;

- employees in the kitchen should identify themselves with the organisation and its goals;

Page 2

- know how to participate in / support apprenticeship training: both manager and employees cooperate with local gastronomy schools and make suggestions to improve apprenticeship training;
- the manager is aware that apprenticeship is a good method of human resource management;
- understands that progress is possible only with continuous professional development
- is able to search for the right training course for employees in the kitchen, or develop his or her personal skills;
- is able to manage time well;
- the management accepts that learning is a life-long process and that employees of all ages should be supported in personal development;

Page 3

- knows how to use participatory management at work;
- is able to motivate employees; to set good working atmosphere and promote the well-being of employees;
- knows how to present these topics: organic farming, sustainability in preparing and serving food (use of energy, waste management), local, seasonal, fresh food, authentic breeds, plants;
- understands the benefits of using local food and is able to explain them to the customers

Page 4

Tips:

1). "Culture of excellence" in any case means finding the most effective and satisfying way to fulfil the organisation's vision and mission.

Please, visit www.effenv.com to expand your knowledge on the topic.

2). Good is always the biggest enemy of Great. Don't settle for being good when you can be great! Always strive to be better and do better. For more [here](#)

Page 5

Know- How: When striving for excellence, you must rely on a team of real professionals. Professional men and women, talented, experienced and committed people who aim to find solutions and learn more every day. Everyone should give his best whether in purchasing, in the kitchen, in the dining-room, in logistics or in the offices.

In the Kitchen: Choosing a product. Cutting it to perfection. Frying, roasting, sautéing, boiling, or reheating it to give it that crunchy or melting quality that will delight the palate. Devising an unusual marriage between a spice and a vegetable. Cooking is a complex and mysterious art requiring knowledge, technical expertise, as well as inspiration and creativity.

Page 6

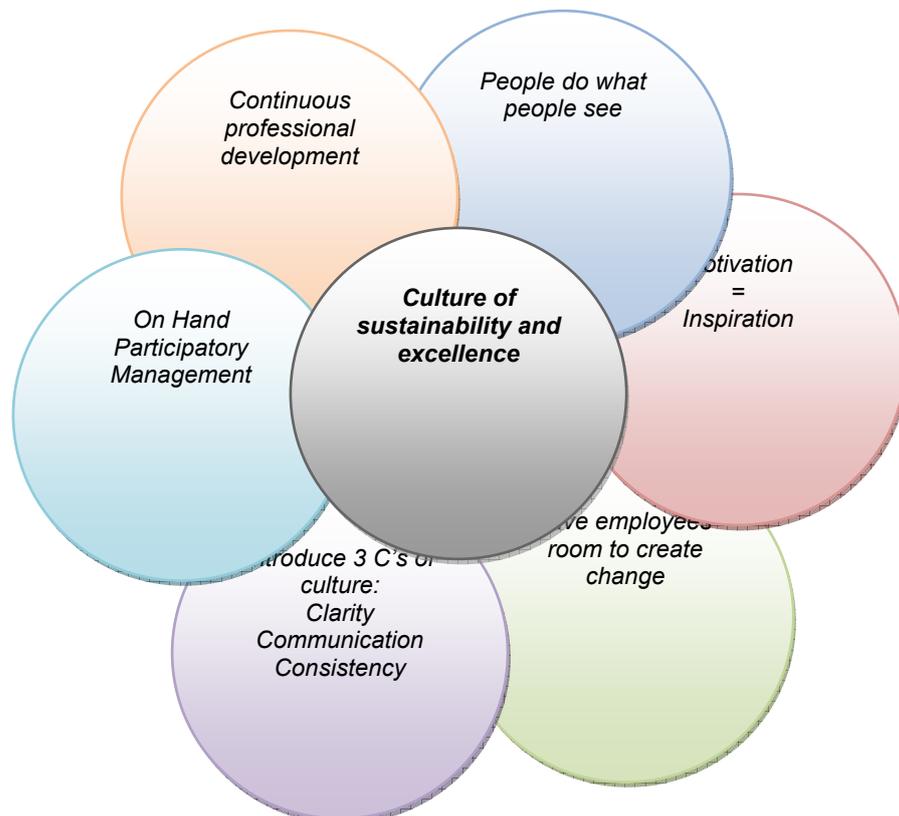
Recommended: Theo Gilbert-Jamison's leadership book, *The Six Principles of Service Excellence*

In reading this book, you will find that The Six Principles of Service Excellence IS: A simple, yet comprehensive, step-by-step process that will lead any organisation (small or large) to achieving and sustaining a work environment that will foster superior employee performance and service excellence. More than a theory or concept. It is a process that is effectively used in many healthcare, financial, legal, hospitality and food service organisations today by skilled and knowledgeable performance consultants and leaders. You will further come to realize that The Six Principles of Service Excellence IS NOT: A quick-fix. It is not about herding a group of employees through a 2-4 hour customer service workshop and calling it a day. Without 100% commitment and involvement from senior leadership, it will not thrive. It is about making sound decisions and implementing interventions that will create lasting results.

Chapter 3: Encourage employees to carry the organisational sustainability and excellence message

In the gastronomy sector, the staff is a key determinant of the quality and efficiency of the business. When the team has been together for a long time, a particular atmosphere is created and gives it character. Each link of the chain is important to the overall performance. From the chefs to the bartenders – all have a decisive role to play. The company's success depends on: staff commitment; motivation to work; specific assessment of the work; fair wages. Very often the emphasis in staff training is placed on mastering social skills. Training courses generally follow a certain teaching programme: explanations - demonstration - practice - check. The training programme for the acquisition of social skills is similar: explanations - examples - exercise - review.

Page 1



The figure above tries to summarize the concept of sustainability and excellence from the perspective of the employees in a company.

Page 2

Here are some suggestions on how to encourage your restaurant's employees to carry the organisation's sustainability and excellence message:

1. Roll up your sleeves

The fact that you manage the restaurant does not give you an excuse to spend more time in the office. Roll up your sleeves and work in the restaurant, particularly at peak times. Try to help each of your employees. Get on the placement of clients, clean the tables and even wash dirty dishes. You will give a good example to your employees, see what problems occur in each position, hear suggestions for improvement and have first-hand knowledge of client requirements. You will be surprised to see how these actions will motivate your employees and encourage cooperation.

Page 3

2. Giving due recognition

Unfortunately, we do not always pay attention to the work of the restaurant staff and do not give them sufficient recognition. But one of the main responsibilities of any manager is to monitor the work of employees and evaluate it. So if talking to customers, they compliment a waiter or a particular dish, make sure you share the good reviews. Chefs, in most cases, do not have a direct contact with the customers so it is important to give them feedback.

Page 4

3. Ask questions

Do not be afraid to ask questions to your employees and encourage them to give feedback. At the end of each working shift, ask them to tell you in short about their work during the day - ask them what orders they had, whether they had problems with clients or colleagues and if they have suggestions for improvement. This is useful for team coordination and to maintain high standards.

You will probably get a lot of suggestions which, for one reason or another, you will not be able to put into practice. But it is also likely that it will give you a few precious ideas you've never thought about. You'll be surprised how well employees will react if occasionally you enact some of their ideas.

Page 5

4. Develop your own culture of excellence, bearing in mind the particularities of your business

So you have taken the decision to implement a culture of excellence in the restaurant, but have not succeeded in convincing the customers. Talk to the Chef and survey all kitchen employees on what could be improved. Ask the customers what they appreciated and disliked about the food and service. Then, make a working plan and stick to it.

Page 6

A canteen's (link to module 2, unit 8) culture of excellence is not materially different from a restaurant's. The food provided in a canteen has a significant influence on the students' health and nutrition which is why it is all the more important to insist on the issue of sustainability. An greater number of stakeholders are involved and it is important for parents, teachers and students to work together to support a whole-school approach

to food where students actively choose nutritious foods and a healthy lifestyle. Good example can be found on: [Healthy Canteen Kit](#)

Page 7

Tips:

1). It turns out that the quest for excellence is somewhat like trying to quit smoking--there are hundreds of plans, but in reality none of them work very well, at least not without a strong commitment from the top. According to research, between 60 and 90 per cent of organisational change initiatives fall flat. It's no wonder. Making the changes that lead to excellence is not an overnight pursuit--it's a long process that often means rewiring a company's fundamental DNA.

2). the two fastest ways to create a culture are through storytelling and example-giving.

Page 8

Useful links: You can find here the Fundamental Concepts of Excellence - [The European Foundation for Quality Management, EFQM](#)

Be inspired: Real life story – example from your country

Chapter 4 - How to use participatory management at work

Participatory management is a system in which employees of a business organisation take an active role in the decision-making process as it relates to the way the business operates. There are various approaches to the level of participatory management a business may engage in. Some examples are self-managed work teams, professional enrichment opportunities, increasing levels of responsibility for employees and even employee-owned business ventures.

Lesson 1: Some Examples of Participative Management & Its Uses

Page 1

Promoting Learning and Career Development

Staff training courses in the kitchen, supporting employees who take a part in culinary competitions; clearly established rules for staff development in the company, etc. are good examples in this respect. Using participative management strategies, effective leaders encourage their employees to identify performance gaps and set their own career path using company resources, including:

- Formal education - culinary schools, community colleges etc. offer certificates and associate's degree programs for students interested in catering careers.
 - Workshops - may be provided by employers wishing to train their own employees. These types of workshops teach for example how to plan menus, store food and take inventory. Other options are national associations who organise annual meetings, where professionals can learn from experts in the catering world, network with others in the field and study new catering trends.
 - Self-passed courses – it is an option for any employee who has decided to develop professionally in his/her sector. **??? self-paced or self-taught?**
- Of course, there are many paths to training and many different methods can be used, except the above mentioned, also e-learning courses, action-orientated education, benchmarking etc.

Page 2

Increasing Employee Satisfaction

By running focus groups and personal interviews, effective leaders get input from their subordinates about the true state of the organisation. Using this valuable feedback, these leaders realign their strategic objectives.

Besides a better working environment and fair wages, the following also have an impact on the satisfaction of your employees: give your employees more control over their schedules, environment, and/or work habits; create employee-driven competitions where each employee can set personal goals; keep a good communication. Good organisation always saves time and improves efficiency.

Page 3

Improving Processes

Effective leaders reward employees for innovative ideas. Using quality management techniques such as Lean Six Sigma, managers identify opportunities to improve company processes that reduce product errors, eliminate waste and increase customer satisfaction. By involving employees closer to the problems, such as electing customer service representatives, effective leaders gather data to determine the root cause and fix problems.

Valuing Diversity by fostering a collaborative work environment.

Useful link: [Canteen management](#)

Lesson 2 Transform your staff into a true team

In global organisations, effective leaders ensure that teams work well together. By running workshops and team-building exercises, these leaders encourage their subordinates to learn about their co-workers, business partners and suppliers. By recognizing that succeeding in a dynamic marketplace requires expertise in dealing with different cultures, customs and traditions, effective leaders foster a collaborative work environment.

Page 1

Team building has been proven to increase drive and productivity in the workplace; your restaurant is no different. The first thing that you, as manager, will have to do is come up with a game plan. You will have to commit to team building, and stick with it. If you can do this, your reward will be better service for your guests, a better work atmosphere and a lower staff turnover. The other important thing to remember when it comes to team building is the way that the staff views management. In order to be thought of as a strong part of the team, management needs to set a clear list of expectations, and stick with it. The main team building activity can be anything from a staff party to an outdoor soccer game. The last thing to know about team building is it needs to be fun. The activities you choose must be relevant for the group that you are working with. The team will bond over common interests, so make sure you know what the team likes to do, before you choose the main team building activity. Make team building something that your team looks forward to ([source](#)).

Page 2

By creating an environment where teamwork is one of the top priorities, restaurants can retain valued employees, increase customer satisfaction, and exceed sales goals. Here are some directions on how to transform your staff into a good team:

✓ The leader should be willing to work shoulder to shoulder with the employees to understand the employees' jobs;

- ✓ Create opportunities for employees to get together to tackle issues that pop up on a daily basis. As long as people have to work together, the more likely it is they will begin to function as a close-knit team;
- ✓ Give the process needed time, because an effective team cannot be built in a day;
- ✓ Discuss, decide, do real work together;

Page 4

Here you can find a [questionnaire](#) "What stage is your team in?"

Link to [10 Ways to Make Your Restaurant Staff Awesome](#)

Participatory planning is a process by which a community undertakes to reach a given socio-economic goal by consciously diagnosing its problems and charting a course of action to resolve those problems.

Lesson 3 Motivating and Retaining Employees

Page 1

Recruitment and retaining of qualified and loyal staff is important for any organisation and at the same time it is one of the challenges facing companies in the hospitality sector. High turnover affects the quality of services and the cost of hiring substitutes. What causes people to behave in a certain way? How can they be stimulated to give the best of themselves? What motivates them to work better and harder? These and similar questions are the basis of many theories seeking to explain how people behave in a working environment. Among the most popular tools for motivation is money, work, training and staff development, teamwork, eliminating the negative impacts, leadership, imposing requirements and recognition of achievements.

Link to: Keep restaurant employees motivated ([National Restaurant Association](#))

Page 2

[Shared experience](#): What sorts of things are you doing to train and keep employees?

- Every day we have 15 minutes of serious training before pre-shift. The short meeting can be on anything, from a cooking demo to someone's love of beer. We do it because it gives a depth of knowledge to the staff and it keeps them fresh.
- Our hiring of people centres around what we call enlightened hospitality, which means giving people the tools they need to do the job successfully. It's my job to hire the best people possible and then make sure that they hold everyone below them to the highest standards possible.
- Create a crew ladder;

Page 3

- You can teach someone to roll a burrito, but there are 13 characteristics that you can't teach, like friendliness and a willingness to serve others. People with these characteristics are the ones you want to hire.
- It's also important to give your employees incentive. For example: In a restaurant, they're slower in the winter than the summer. During the summer months when things get busy, they share the extra revenue.
- A key is to use your people to make things better. For example, we were not happy with our coffee program in our restaurants. So we created a barista Olympics, where the top barista from each restaurant competed against each other. This friendly

competition led to better coffee in our restaurants. Now we're using that same model to target other areas of the company that need improving.

Page 4

Useful links: [Top Ten Ways to Keep Restaurant Employees Motivated](#)
[Guide to Motivating Employees](#)

Be inspired: Real life story

Test:

Question 1: Which of the following meets the principles of sustainability?

- Answer: You are not interested where a fish is from and how and when it was caught.
- Answer: Using green-coloured packaging and the words 'eco' or 'organic' in our product, it is enough to sell our product as being 'green'.
- Answer: Purchase from purveyors whose conservation practices lessen our impact on the environment.

Question 2: What can be called a sustainability myth?

- Answer: Sustainability is about re-cycling materials, therefore other than installing recycling bins into our offices, sustainability doesn't affect my business.
- Answer: Sustainability is ultimately about making more efficient use of resources, and cutting waste not only for the good of the earth and society, but it is good business practice.
- Answer: Sustainability can be easier measured by non-financial indicators.

Question 3: Developing culture of sustainability and excellence is based on the following:

- Answer: Employees in the kitchen should identify themselves with the organisation and its goals.
- Answer: To understand the benefits of using local food with geographic origin and to be able to explain them to the guests.
- Answer: Both are correct.

Question 4: How to encourage the employees to carry the organisational sustainability and excellence message?

- Answer: Listen to them
- Answer: Rule them
- Answer: Ignore them

Question 5: What is the participatory management?

- Answer: a leadership style that allows managers to make decisions alone without the input of others.
- Answer: a system in which employees of a business organisation take an active role in the decision-making process
- Answer: a management in which leaders focus on the big picture within an organisation and delegate smaller tasks to the team to accomplish goals.

Unit 15: Marketing and communications

Photograph describing the unit

In this Unit I will learn how to:

1. plan and execute communication activities in order to earn customer trust,
2. promote the healthy and sustainable food offering.

Introduction into the topic:

Shoppers are [seeking out greener products](#), energised by the prospects of healthier alternatives, higher quality, preserving the environment and saving time and money. Nevertheless, the potential to confuse consumers with misleading green claims is high. Sustainability issues are highly technical, complex and fast moving. When claims are unclear, marketers can be labelled as greenwashers and their marketing as deceitful. Being perceived as not trustworthy can seriously damage a company's credibility.

Chapter 1 - Marketing strategies to earn consumer trust

Gaining and keeping customers trust is the most important goal of your marketing strategy. Whenever you communicate with existing or potential customers, make sure you tell your green story. But always do it in a trustworthy and transparent way. Your restaurant success depends on the loyalty and trust of your customers.

Here are a few steps on how to achieve it.

Page 1

Walk your talk

A company perceived as committed to sustainability and sound environmental policies gains the good graces of consumers. Such companies have many of the following attributes in place:

- A visibly committed restaurant owner or operator. Only a chief executive with a clear vision can make environmental soundness a corporate priority and forge an emotional link between a company and its customers. Projecting a personal commitment to the environment, CEOs win their stakeholders' trust.
- Empower employees. Bring employees up to speed about climate change, clean technology and green consumer behaviour. Identify ways for them to get involved.
- Be proactive. It projects leadership and sends a message to stakeholders that risks are minimized. Proactive companies can help define standards, and discover opportunities for cost-effective eco-solutions.
- Communicate your values. Many sustainability leaders communicate core values to establish emotional connections. Also called "purpose marketing" or "pro-social marketing," values-based marketing avoids hard-sell ads in favour of soft-sell campaigns.
- Green your marketing practices. Paper with recycled and/or sustainably harvested content and printed with soy-based inks reduces environmental impacts, as does the use of electronic media to replace printed marketing.

Page 2

Be transparent

- Provide access to the details of products and corporate practices and actively report on progress.
- Get radical. Get a jump on competitors and regulators — and score points with consumers — by disclosing as much as possible.
- Don't hide bad news. Consumers get angry when they suspect that companies have hidden information.

Page 3

Enlist the support of third parties

Popular and credible forms of third-party support include eco-labels, environmental product declarations and cause marketing.

- If no eco-label exists in your industry, you can help develop one. Create demand with marketing consistent with eco-label guidelines. For example [Energy Star](#) enjoys strong general awareness.
- Endorsements and awards. Credible third parties can halo brand imagery.
- Cause marketing and beyond. Best known as promotional efforts in which a business donates a portion of product revenue to a relevant non-profit organisation, cause-related marketing can distinguish brands in a cluttered marketplace. These practices ensure that environmental efforts are authentic, aligned with business goals and in step with consumers' desires to do good via their shopping.

Page 4

Focus on primary benefits

The surest route to avoiding a greenwasher label may be to avoid using green claims altogether. Eco-aware or not, consumers want to know how products can benefit them personally.

Focusing on primary benefits in a story that incorporates environmental responsibility as a desirable extra is preferred.

Chapter 2 - How to Market your Restaurant or Canteen Effectively

Marketing is more important than ever. Gastronomic businesses today are successful largely due to the marketing initiatives taken to popularise them. There is a distinct target market that all restaurants seek to capture and the most successful marketing tactics help some of them create a niche for themselves.

Page 1

Putting basics in place

Marketing initiatives can begin after putting the basics of the catering establishment in place. For both new and existing restaurants and canteens, marketing efforts would have to be built on a good menu offering variety, well prepared recipes, good quality food and service, and a well trained staff. The operations have to be efficient and attention to detail will impress customers. Only then can you make an effort to communicate your specific “green” competence.

Hygiene and Freshness

Extremely important. It is one of the first things customers will observe when they arrive at or walk past a restaurant. The marketing message must include that hygiene and freshness are your top priority.

Page 2

Start small

Restaurants and canteens usually cannot afford a huge marketing budget. Start small with simple marketing activities which are well thought out and executed.

Page 3

Effective positioning

Your catering business has to be positioned right to be successful. It must fall into a niche segment and all that it offers must be in tandem with what it represents. If you decide to make your business “green” or sustainable, that is a great way to position your business and differentiate it from competition.

Page 4

Be different from others

Most restaurants spend large amounts on getting new customers, little realizing that if they have quality product and service on their side, they will benefit far more from existing customers. Wooing them for repeated visits would be far easier, something most restaurants do not consider.

Page 5

Brand building

Restaurants become powerful brands when they deliver what they promise and customers begin to expect the high standards that are associated with their brand. Consistency becomes critical for brand sustenance.

Page 6

Understanding competition

Restaurants need to know what they are up against, namely their competitors, the market and expectations of customers. Knowledge and awareness hold the key to effective planning and help to formulate the right strategies.

Page 7

Never sit back

Marketing efforts would come to nothing if after the initial steps, no follow up strategies were implemented. Every few months a revision in the menu, new local supplier or a seasonal specialty will help to keep up the restaurant’s popularity.

Chapter 3 - Green Restaurant Marketing

Since most consumers say they would prefer to eat at an eco-friendly restaurant, going green really can help you build your customer base. But if no one knows about your green qualities, you will never benefit from them. By implementing some good marketing techniques, you can spread the word about your green business, and in the process you will cement your ties with the community.

Lesson 1: Eco-Friendly Promotions

You can promote your restaurant by rewarding customers for their own eco-friendly practices or by offering them environmentally friendly meals.

Page 1

Try the following:

Reward your green customers

Consider offering customers rewards for their own green lifestyles. You could offer a discount to customers who walk or ride their bikes or take the bus to your establishment instead of driving. Come up with new creative incentives. For example, you could also offer discounts or free items to customers who bring in recyclable materials, or if you own a coffee shop, offer discounts to customers who bring their own reusable thermos.

Page 2

Offer green specials

Try to develop menu offerings that are specifically environmentally friendly. For example, you should consider serving several vegetarian, all-organic or all-local dishes or beverages. Use a special symbol to mark your organic and locally-grown items, or showcase them on a special menu insert or table tent that informs customers about the foods' green qualities and explains why the special items are pricier.

Lesson 2: Green Public Relations

Getting press for your restaurant is the best way to market your green qualities. Making the news is free marketing, and it creates a positive image for your restaurant.

Page 1

To create newsworthy stories that tout your green qualities, try some of the following tactics:

Host a green event

Many event planners are looking for an eco-friendly venue. Try hosting an environmental film screening or a tasting featuring organic and locally-grown foods, wines or drinks. You could also hold a fundraising event or a community gathering that focuses on the environment. Whatever you choose to do, make sure you notify local newspapers, magazines and news stations to ensure proper event marketing.

Page 2

Develop partnerships

Consider asking other businesses to join you in initiating a recycling or composting programme. You could partner with another eco-friendly business by offering your customers coupons for that business and asking them to do the same for you.

Page 3

Help with community programs

Try hosting school field trips or environmental educational classes for kids. This kind of community involvement not only encourages environmentally responsible behaviour in the next generation, but it also gets the community interested in your business. You can establish yourself as a green leader in the community.

Tips: how to implement the topic to the everyday life of my kitchen: 7 Marketing Ideas for your restaurant or canteen

Check out these easy, low-cost marketing tactics that will help create a buzz about your business.

Page 1

1. Get good press

A news story or magazine article generates far more credibility than paid advertisements and reaches a larger audience.

It may seem like getting good press is out of your control, but there are plenty of steps you can take to ensure the local media takes notice of your business. Here are some ways to get in the news:

Host events

By hosting an event, you will probably get a mention in the “events” section of the newspaper, at the very least. Good ideas for events include fundraisers, concerts, tastings, competitions, community or school events, parties and classes.

Donate to charity

Give a portion of your sales to a local charity or host a fundraiser. It is important that the community sees your restaurant as a positive presence. You should work with the nearby community and consider donating something to local schools, campaigns and charitable events.

Page 2

Make yourself unique

Anything you can do to make yourself unique is potentially newsworthy: switching to eco-friendly practices, menus and marketing

Write articles

Offer to write a story or give a recipe to a local paper or magazine. Focus on getting in the “food” section. Create press releases or stories about your restaurant such as a focus on your local producers and the positive impact they have on the local economy.

Impress a food critic

You should make a point to learn about the nation’s most famous food critics as well as any local or regional food critics. Give them a good reason to come to your restaurant by offering a unique dish.

Page 3

2. Use your website

More and more, consumers are turning to the Internet to decide where they will eat out next. If you already have a website, make sure it is pulling its weight. Can customers easily find all the important information, such as hours, location and the menu? It is also essential that your site is mobile friendly.

3. Redesign the menu

Your menu is your best merchandising tool, and a boring, outdated or ugly menu can cause customers to downgrade your restaurant. Make sure your menu is fresh, well-written and enticing. There are also several tactics you can use to influence customers' choices and sell more of your most profitable menu items.

4. Implement frequency marketing

Regular guests are your most valuable resource. Not only do they typically provide you with 1/3 of your revenues, but they also help market your restaurant through word of mouth. To get the most profits, you need to increase your number of regular customers.

Page 4

5. Host events

Turn your restaurant into a venue for tastings, community and business gatherings, farmer talks, live music shows, and other events. This will help you to attract new

customers and give your regular customers a reason to keep coming back.

6. Promote through email

When compared with direct mail marketing, email marketing is faster and more efficient, saves paper, reduces marketing expenses and is more likely to convert to a sale.

7. Commit to going green

Implementing eco-friendly practices will help your profits by lowering utility costs and giving you an edge over the competition. Market your green restaurant to show customers that you preserve resources, reduce pollution and care about the community and local economy.

Be inspired: Real life story – example from your country

One example from the gastronomy sector:

Restaurant creates a recycling program

The Rock Fish, a restaurant in Annapolis, Maryland, has successfully implemented a joint program with the local community. Since their city did not offer them a recycling program, managers at the Rock Fish asked other businesses to bring in their recycling, and even offered a free beer to anyone who participated. Because of their initiative, the Rock Fish received press and good will from the community.

Restaurant educates children

Pizza Fusion, an eco-friendly chain restaurant, holds classes to teach kids about helping the planet.³ The kids learn about the environment, and they also learn about Pizza Fusion's pizza.

One example from public catering sector

Bon Appetit announces animal welfare reforms

Hoping to set a standard for others in the industry to follow, food-service giant [Bon Appetit Management Co.](#) announced that it will purchase pork, liquid eggs and veal only from producers who follow more humane practices. This generated great press, including [this article](#) in the Washington Post.

Bon Appetit is an on-site restaurant company offering full food-service management to corporations, universities, museums, and special venues. Based in Palo Alto, CA, it operates more than 500 cafés in 32 states for dozens of clients.

All of their food is cooked from scratch, including sauces, stocks, and soups. A pioneer in [environmentally sound sourcing policies](#), they've developed programs addressing local purchasing, overuse of antibiotics, sustainable seafood, the food–climate change connection, animal welfare, and farm worker rights.

Glossary:

Marketing: Marketing is the process of [communicating](#) the value of a product or service to [customers](#), for the purpose of selling that product or service.

Greenwashing: is a form of [spin](#) in which [green PR](#) or [green marketing](#) is [deceptively](#) used to promote the perception that an organisation's products, aims or policies are [environmentally friendly](#).

Culture of excellence – way of thinking within the organisation which strives to the quality of being outstanding or extremely good.

Organisational culture of sustainability - a culture in which organisational members hold shared assumptions and beliefs about the importance of balancing economic efficiency, social equity and environmental accountability. Organisations with strong cultures of sustainability strive to support a healthy environment and improve the lives of others while operating successfully over the long term.

Participatory management - a system in which employees of a business organisation take an active role in the decision-making process as it relates to the way the business operates.

Test:

Question 1: What does a sustainable restaurant or canteen have in place to create trust among its stakeholders and customers?

- Answer: A visibly committed restaurant owner or operator.
- Answer: Empowered employees.
- Answer: Proactively defines standards and discovers opportunities for cost-effective eco-solutions.
- Answer: Uses green marketing practices.
- Answer: All of the above.
- Answer: None of the above

Question 2: What is the most visible eco-label used in the gastronomy equipment field?

- Answer: Green Point
- Answer: Energy Star
- Answer: Fair trade
- Answer: AAA+

Question 3: How do you create newsworthy stories that tout your green qualities?

- Answer: Host a green event.
- Answer: Help with community programs.
- Answer: Develop partnerships with local stakeholders on green topics.
- Answer: All of the above.

Question 4: What low-cost marketing tactics can be used to get press coverage of your restaurant?

- Answer: Write articles about interesting topic and send to journalists.
- Answer: Donate part of your profits to local charities.
- Answer: Make your business unique by writing about your sustainable practices.
- Answer: All of the above.

Question 5: Who are the most valuable resource for your restaurant's revenues?

- Answer: New customers.

- Answer: Regular customers.
- Answer: Employees in the nearby factory.
- Answer: All of the above.
- Answer: _ None of the above.