

Labensky Hause Martel Malley Bevan Sicoli

# OnCooking



**A Textbook of  
Culinary Fundamentals**

 **Pearson**

Seventh Canadian Edition

# Thank you to our Canadian Chef Contributors!



Clark Adams  
Sharir Ali  
Michael Allemeier  
Roger Andrews  
Volker Baumann  
Serge Belair  
Tim Belanger  
Anthony Borgo  
Ian Bragoli  
Scott Brown  
Bernard Callebaut  
Mike Cortese  
Ian Cowley  
Melissa Craig  
Sukant Dakua  
Poyan Danesh  
Sabrina del Ben  
Shaun Desaulniers  
Michael Desborough  
Connie de Sousa  
Pierre Dubrulle  
Simon Dunn  
Rosalyn Ediger  
Rudolph Fischbacher  
David Flegel  
Fintan Flynn  
Frank Formella  
Domenico Forte  
Jesse Gilhula  
Michael French  
Pamela Good  
Dennis Green  
Hermann Greineder  
Kyle Groves

Jamie Harling  
Ken Harper  
Scott Harrison  
Rogelio Herrera  
dee Hobsbawn-Smith  
John Jackson  
Adrian Jemmett  
Desmond Johnston  
David Jones  
Mark Jorundson  
Chris Kaiser  
Daryl Kerr  
Maynard Kolskog  
Joseph Kumar  
Albert Kurylo  
Justin Labossiere  
Philip Leach  
Albert Liu  
Troy Lymburner  
Roary MacPherson  
Martin Makulowich  
Bruno Marti  
Bob Matthews  
Colin Maxwell  
Patrick McClary  
Evelyn McManus  
Ken Nakano  
Michael Noble  
Gilbert Noussitou  
Jeremy O'Donnell  
Hayato Okamitsu  
Aurelio Petraglia  
Peter Phillips  
Mark Plouffe

Francisco Rivera  
Liana Robberecht  
Louis Rodriguez  
Suman Roy  
Santosh Sahoo  
Pierre Jean St-Pierre  
Felix Sano  
Garnett Schoettler  
Peter Schuster  
Andreas Schwarzer  
Howard Selig  
Judson Simpson  
Simon Smotkowicz  
Joerg Soltermann  
Gerd Steinmeyer  
Andrew Stevens  
Larry Stewart  
Robert Allen Sulatycky  
Rachel Taylor  
Greg van Poppel  
Vinod Varshey  
Mikael Volke  
Kevin Wall  
Andy Waters  
Dan Westgeest  
Morgan Wilson  
Sergio Zevallos  
Blair Zinck

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We are pleased to offer recipes from these Canadian chefs. Selected recipes can be found within the printed text with a larger collection available on MyCulinaryLab and through Pearson Kitchen Manager.

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Labensky Hause Martel Malley Bevan Sicoli

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**A Textbook of  
Culinary Fundamentals**

**Seventh Canadian Edition**



**EXECUTIVE ACQUISITIONS EDITOR:** Kimberley Veevers  
**MARKETING MANAGER:** Michelle Bish  
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**PROJECT MANAGER:** Jessica Mifsud  
**MEDIA EDITOR:** Nicole Mellow  
**MEDIA PRODUCER:** Tiffany Palmer  
**PRODUCTION SERVICES:** Cenveo® Publisher Services

**PERMISSIONS PROJECT MANAGER:** Sarah Horsfall and  
Kathryn O'Handley  
**PHOTO PERMISSIONS RESEARCH:** iEnergizer Aptara®, Ltd.  
**TEXT PERMISSIONS RESEARCH:** iEnergizer Aptara®, Ltd.  
**COVER AND INTERIOR DESIGNER:** Anthony Leung  
**COVER IMAGE:** EsHanPhot/Shutterstock  
**VICE-PRESIDENT, CROSS MEDIA AND PUBLISHING SERVICES:**  
Gary Bennett

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# FOREWORD

You have decided to pursue a career that will define you as a person and as a professional. Embarking on the lifelong journey of a culinarian requires stamina, perseverance and a willingness to learn from one's mistakes. It is no coincidence that *On Cooking* begins with lessons in professionalism. This remarkable resource offers a path to becoming a professional chef by focusing on the main ingredients for success: training, skill, taste, judgment, dedication and pride.

Cooking is a dynamic and demanding profession and the chefs who have generously contributed to *On Cooking* exemplify the very best in Canadian cuisine. Because of their dedication to the profession and commitment to the next generation of cooks, their participation makes *On Cooking* the foundation on which you can begin your culinary training. Learn from these experts; they will serve as your mentors and guides throughout your culinary career.

Know that the profession you have chosen is part of a larger community. As president of the Canadian Culinary Federation/La Fédération Culinaire Canadienne (CCFCC), I look forward to welcoming you into Canada's foremost professional culinary association. Canada is well respected in the international culinary scene and the CCFCC's participation in competitions, professional development and outreach programs offers you opportunities to hone your skills, network with colleagues and build friendships. After more than 25 years in the profession, I still think that being a chef is the best job in the world, and this text is the first step to becoming part of a dynamic group of passionate individuals who are dedicated to food and family.

Donald Gyurkovits  
President, CCFCC



## Donald Gyurkovits

A veteran of the hospitality industry, Chef Donald Gyurkovits is a career chef. With 25-plus years of experience, he has extensive knowledge of kitchen operations management, menu development and supplier relations. Chef Gyurkovits is president of the Canadian Culinary Federation (CCFCC), vice president of Aregala Canada and director of the Culinary Arts Foundation, British Columbia. His participation in the CCFCC allows him to pursue one of his passionate interests—mentoring junior chefs. The recipient of the 2007 British Columbia Chefs' Association (BCCA) Citation of the Year award, a 2010 Leadership Award from the Canadian Association of Foodservice Professionals and the 2011 British Columbia Chef of the Year, Chef Gyurkovits has guided many young chefs to gold, silver and bronze medals. As a well-respected culinary professional, he believes that being a chef is the best job in the world.

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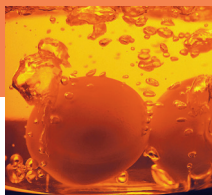
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# PREFACE

Welcome to the seventh Canadian edition of *On Cooking: A Textbook of Culinary Fundamentals* with MyCulinaryLab. Learning to cook entails much more than simply learning to follow a recipe. This edition focuses on culinary principles, with supporting recipes in the text and available as PDF files in MyCulinaryLab. MyCulinaryLab also includes Pearson Kitchen Manager, a recipe program with a recipe bank (including all of the recipes that appear in the text) as well as scaling, conversion and costing tools.

We have carefully checked the coverage in the text to ensure that it addresses the Interprovincial Standards Red Seal Program. The Red Seal Program was established more than 55 years ago to provide greater mobility across Canada to skilled workers. Today, it represents a standard of excellence for the culinary industry in Canada recognized federally with the Red Seal Endorsement (R.S.E.) professional designation. Mastering the concepts, skills and techniques in *On Cooking* will provide you with all of the tools you need to succeed in your Red Seal examination and in your career.

This book is illustrated extensively with photographs and line illustrations to help you identify foods and equipment. The emphasis is on culinary principles, not recipes. Whenever possible, we focus on the general procedure, highlighting fundamental principles and skills, whether it be for preparing a yeast bread or grilling a piece of fish. We discuss both the *how* and the *why* of cooking. Only then are specific applications and sample recipes given, with a focus on basic recipes. Many recipes include photographs of the finished dish, ready for service; many procedures are illustrated with step-by-step photographs.

To provide you with a sense of the rich tradition of cookery, informative sidebars on food history, chefs' profiles and other topics are scattered throughout the book. Additional chapters on MyCulinaryLab explore *mise en place* and buffet presentation. Hotel and restaurant chefs and chef instructors from across Canada have contributed recipes to this program. These recipes allow you to explore the different techniques and styles used by a range of professionals and help to characterize Canadian cuisine.

We wish you much success in your culinary career and hope that this text will continue to inform and inspire you long after graduation.

## APPROACH AND PHILOSOPHY OF ON COOKING

*On Cooking*, Seventh Canadian edition, follows the model established in our previous editions, which have prepared thousands of students for successful careers in the culinary arts by building a strong foundation based on sound fundamental techniques. Students and instructors alike praise *On Cooking* for its comprehensive yet accessible coverage of culinary skills and cooking procedures.

*On Cooking* starts with general procedures, highlighting fundamental principles and skills, and then presents specific applications and sample recipes. Core cooking principles are explained as the background for learning proper cooking techniques. The culinary arts are shown in cultural and historical context as well, so that students understand how different techniques form the basis for various cuisines. Once mastered, these techniques can be used to cook a wide array of foods. Instructors can use the additional recipes available on MyCulinaryLab, both as PDFs and in Kitchen Manager, to add to the many recipes already contained in the text.

Chapters focus on five areas that are essential to a well-rounded culinary professional:

- *Professionalism*: Background chapters introduce students to the field with material on food history, food safety, nutrition and menu planning. Food safety information has been updated to reflect the most recent regulations.
- *Preparation*: *On Cooking* covers the core subjects with which all culinary students should be familiar before stepping into the kitchen. Equipment and basic knife skills are presented. Staple ingredients such as eggs, dairy products, herbs and spices are covered.
- *Cooking*: Fundamental cooking techniques are explained and then demonstrated with a wide range of recipes. Individual chapters focus on different categories of key ingredients: meats, poultry, fish, vegetables and so forth. A separate chapter on lifestyle cooking focuses on healthy eating, including food allergies, gluten-free cooking and vegetarian cuisine.
- *Baking*: Several chapters cover the aspects of bread and pastry making that every student should know. The material is sufficient to support a stand-alone unit on bread baking and dessert preparation.
- *Meal Service and Presentation*: Brunch and appetizers are covered, and a separate chapter on beverages includes discussions of water, juice, coffee and tea as well as wine and food pairings. A final chapter on plate presentation demonstrates traditional and contemporary techniques for enhancing the visual presentation of food.

## NEW TO THE SEVENTH CANADIAN EDITION

The following changes have been made to the structure and organization of the text:

- One of the biggest changes made in this edition is the addition of **many more recipes** to illustrate core competencies and various cooking methods. Having these recipes in the text, right where a cooking method or procedure is discussed, provides quick and easy access for students and instructors.
- Chapter 21, which used to cover Buffet Presentation, now covers International Flavour Principles, including material on Chinese, Japanese, Indian, North African (including Ethiopian), Middle Eastern, South American, Caribbean and Canadian Indigenous cuisines. This change reflects the increasing use of new ingredients by many chefs and the varied menus that are now found at many restaurants. The chapter on Buffet Presentation is still available on MyCulinaryLab.
- Over **300 additional recipes** are found on MyCulinaryLab, included as PDF files so they are easy to locate, view and/or print.
- All recipes that are available on MyCulinaryLab are listed in the recipe index as well as at the end of each chapter, making it easy for students to find and try these additional recipes.

New information and topics in the text include the following:

- emphasis throughout the text on healthy cooking and nutrition, including healthful fat options and discussion on reducing refined sugar in cooking (Chapters 3 and 24 in particular)
- enhanced focus throughout on local farm-to-table movements (see Chapter 22 especially)
- a discussion on the various career paths open to culinary graduates, including some outside the kitchen (Chapter 1)
- updated information from the Canadian Food Inspection Agency and Health Canada, including up-to-date labelling regulations (Chapter 3)
- expanded information on recipe writing (Chapter 4)

- expanded discussion on pickling techniques, including recipes (Chapter 7)
- expanded discussion on a number of cooking methods, including rotisserie; molecular gastronomy, including a recipe (Chapter 9); sous vide, including two recipes: pork (Chapter 16) and salmon (Chapter 19); and deep-fat frying, including a recipe (Chapter 16)
- a discussion on emulsions (Chapter 10)
- information on quality claims and the rules surrounding what claims producers are legally allowed to make (Chapter 12)
- new tools and technologies, such as combitherm ovens (Chapter 12)
- updated information on beef cuts being promoted by Canada Beef (Chapter 13)
- updated information on purchasing sustainable seafood from the Ocean Wise and Seafood Watch programs (Chapter 19)
- a new recipe for Genoa Salami (Chapter 20) that meets stringent food safety protocols outlined by the CFIA
- information on how to modify recipes to be more healthful (Chapter 24)
- updated information on food allergies (Chapter 24)
- information on new ingredients that are becoming popular, such as flax (Chapter 24) and Haskap berries, which are being grown in Saskatchewan (Chapter 26)
- updated information on “new” bakeshop ingredients, including sugar and fat substitutes, substituting different flours, and alternative thickeners (Chapter 27)
- information on breakfast smoothies (Chapter 33)
- information on teas in Canada (Chapter 35)
- many more photos of contemporary plate presentation (Chapter 36)

#### A NOTE ON THE RECIPES

Recipes are important and useful as a means of standardizing food preparation and recording information. We include recipes that are primarily designed to reinforce and explain techniques and procedures presented in the text. Many recipe yields have been standardized to yield no more than 10 servings, although some variety has been maintained to accommodate different needs.

All ingredients are listed in both metric and U.S. measurements. The metric recipes have been written to reinforce the simplicity and accuracy of the system. Weights for ingredients are used to make food costing easier and to professionalize the recipes. Accurate electronic scales are readily available and inexpensive. U.S. equivalents have been left in volume measures in most cases; note that ounces by weight and fluid ounces are not the same. You should not directly compare the metric conversions against the U.S. measurements; they are not intended to be identical and adjustments have been made. We strongly recommend that you work only in one system, as switching back and forth leads to disappointment with the end product. Each product is unique and there are no magic conversions that work across the spectrum.

Temperature requirements may vary depending on equipment and altitudes. Different ovens will be more or less efficient in maintaining proper temperature, and oven temperature calibrations need to be verified on a regular basis. The temperatures given in recipes should be used as a guideline and adjusted for these factors. Note that metric recipes tend to use finer calibrations, whereas U.S. measurements tend to work in increments of 25°F. Cooking times also may vary depending on the quality of the meat being prepared or other factors.

Throughout the text, standards from the Canadian Food Inspection Agency (CFIA) and Health Canada have been upheld, although real-world practices and customer preferences are also considered.

Throughout the text, unless otherwise noted, *mirepoix* refers to a preparation of 2 parts onion, 1 part celery and 1 part carrot by weight; *pepper* refers to ground black pepper, preferably freshly ground; *butter* refers to whole, unsalted butter; and *TT* means “to taste.”



A nutritional analysis is provided with each recipe. This information is provided as a reference only. Nutrient values have been standardized to CFIA Nutrition Facts Table rounding guidelines. There is a 20% margin of error, due primarily to choices for specific ingredients and variations in the size of fruits and vegetables. When a recipe offers a choice of ingredients, the first-mentioned ingredient was the one used in the calculations. Salt listed as “to taste” (TT) has been added at 0.5 g per serving, unless other ingredients are contributing saltiness to the dish, in which case the additional salt has been decreased or eliminated. Ingredients listed as “as needed” are generally omitted from the nutritional analysis. In addition, canola oil and 2% milk are used throughout for “vegetable oil” and “milk,” respectively. When the recipe gives a choice of serving or weight, the first mentioned is used.



Recipes marked with the red apple symbol are considered healthy and may be low in calories, fat, saturated fat and/or sodium; some may also be a good source of vitamins, protein, fibre or calcium. These dishes are not necessarily dietetic; rather, they should be consumed as part of a well-balanced diet.



Vegetarian dishes are indicated with the green fruit and vegetable icon. These recipes do not contain meat, poultry, fish or shellfish, but they may contain dairy products and/or eggs. Vegetarian dishes are not necessarily low in calories, fat or sodium, nor are they automatically good sources of vitamins, protein, fibre or calcium.

Detailed procedures for standard techniques (e.g., “deglaze the pan” or “monter au beurre”) are presented in the text and generally are not repeated in each recipe. No matter how detailed the written recipe, we must assume that you have certain knowledge, skills and judgment.

Variations appear at the end of selected recipes. These give you the opportunity to see how one set of techniques or procedures can be used to prepare different dishes with only minor modifications. You should also rely on the knowledge and skill of your instructor or chef for guidance. While some skills and an understanding of theory can be acquired through reading and study, no book can substitute for repeated, hands-on preparation and observation.

## STUDENT SUPPLEMENTS

*MyCulinaryLab* ([www.pearsonmylabandmastering.com](http://www.pearsonmylabandmastering.com)). A dynamic online tool, MyCulinaryLab supports the many ways in which students learn, enabling them to study and master the content online on their own time and at their own pace.

The key features of MyCulinaryLab include the following:

- **Pearson eText** gives students access to their textbook anytime, anywhere. In addition to note taking, highlighting and bookmarking, the Pearson eText offers interactive and sharing features. Instructors can share their comments or highlights, and students can add their own, creating a tight community of learners within the class.
- **Pearson Kitchen Manager** is a custom software application that comes loaded with all of the recipes in the seventh Canadian edition of *On Cooking*, the additional recipes available for this edition through MyCulinaryLab, plus more than 100 additional recipes at various levels of complexity, including many contributed by chefs from across the country. The recipes can be scaled and edited, and new recipes can be added. Kitchen Manager can be used to build menus, generate shopping lists and calculate estimated costs at the recipe or menu level.
- **Practice exams** help students to prepare for the journey person’s exam and the Red Seal exam.
- **Chapter quizzes** test students’ knowledge of key points. Marks can be sent to the gradebook, or the quizzes can be used as self-assessment tools for students to check their own understanding of the material and concepts in the textbook.

- **Video clips** demonstrate various kitchen techniques, such as knife skills.
- Two **bonus chapters**, *Mise en Place* and *Buffet Presentation*, are provided.
- Additional information on **food and wine pairings** supplements the material in Chapter 35, *Beverages*, including sample recipes with wine suggestions and detailed pairing charts. A chart on pairing beers with cheeses is also available in this section.
- Information on **culinary competitions** outlines the benefits of competition as an extension of learning and highlights opportunities for students and apprentices.

*Study Guide* (978-0-13-465871-1). The Study Guide provides an overview of the key concepts in *On Cooking* through self-tests, including multiple choice, fill-in-the-blank, short answer, matching and labelling questions.

*Custom Recipes*. Students can access additional appropriate recipes on MyCulinaryLab and Kitchen Manager. These recipes, as well as other recipes developed in your kitchens and schools, can be used to supplement the recipes in the text. Many are contributed by chefs and instructors from across the country.

## INSTRUCTOR SUPPLEMENTS

*MyCulinaryLab* ([www.pearsonmylabandmastering.com](http://www.pearsonmylabandmastering.com)). MyCulinaryLab is an easy-to-use online resource designed to supplement a traditional lecture course. It provides instructors with basic course management capabilities in the areas of course organization, grades, communication and personalization of content. Instructors benefit from course management tools such as a robust gradebook, integrated course email and reporting tools. See the “Student Supplements” section above for a description of the key content on MyCulinaryLab.

The following supplements are available for download from a password-protected section of Pearson Canada’s online catalogue (<http://catalogue.pearsoned.ca>). Navigate to your book’s catalogue page to view a list of the supplements that are available. Speak to your local Pearson sales representative for details and access.

- *Instructor’s Manual*: This manual includes chapter outlines, lists of key terms, additional discussion questions and learning activities. Selected figures and tables, along with other key information from the text, are provided as transparency masters that can be reproduced for classroom use.
- *Test Item File*: Includes more than 1300 test questions, including multiple choice, fill-in-the-blank, matching and true/false, are provided in Microsoft Word format.
- *PowerPoints*: PowerPoint presentations offer outlines of the key concepts in each chapter as well as images from the text.

*Learning Solutions Managers*. Pearson’s Learning Solutions Managers work with faculty and campus course designers to ensure that Pearson technology products, assessment tools and online course materials are tailored to meet your specific needs. This highly qualified team is dedicated to helping schools take full advantage of a wide range of educational resources, by assisting in the integration of a variety of instructional materials and media formats. Your local Pearson Canada sales representative can provide you with more details on this service program.

## ACKNOWLEDGMENTS

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# KEY FEATURES



## After studying this chapter you will be able to:

- name key historical figures responsible for developing food service professionalism
- discuss the development of the modern food service industry
- explain the organization of classical and modern kitchen brigades
- explain the role of the professional chef in modern food service operations
- identify the attributes an apprentice or student cook needs to become a professional chef

## Learning Outcomes and Chapter Introduction

Each chapter begins with clearly stated outcomes. Students can refer to these outcomes while reading to make sure they understand the material. The introduction provides a brief overview of the topics to be covered.

## SAFETY ALERT Epidemics

The beginning of the 21st century has seen a number of agricultural anomalies. Outbreaks of BSE (bovine spongiform encephalopathy) and avian flu and concerns over the safety of aquaculture salmon have caught consumer attention. Producers and governments globally have taken steps to contain or control these outbreaks. Food recalls are common, some of which cost processors millions of dollars when food safety protocols are breached.

**global cuisine** foods (often commercially produced items) or preparation methods that have become ubiquitous throughout the world; for example, curries and french-fried potatoes

**national cuisine** the characteristic cuisine of a nation

**regional cuisine** a set of recipes based upon local ingredients, traditions and practices; within a larger geographical, political, cultural or social unit, regional cuisines are often variations of one another that blend together to create a national cuisine

## Marginal Definitions

Important terms are defined in the margins to help students master new terminology. An end-of-text glossary provides an easy reference for all the key terms.

## Safety Alerts

Brief notes remind students of safety concerns and encourage them to incorporate food safety and sanitation into their regular kitchen activities.

## AUGUSTE ESCOFFIER (1846–1935)

Escoffier's brilliant culinary career began at the age of 13 in his uncle's restaurant and continued until his death at the age of 89. Called the "Emperor of the world's kitchens," he is perhaps best known for defining French cuisine and dining during *La Belle Époque* (the "Gay Nineties").

Unlike Carême, Escoffier never worked in an aristocratic household. Rather, he exhibited his culinary skills in the dining rooms of the finest hotels in Europe, including the Place Vendôme in Paris and the Savoy and Carlton Hotels in London.

Escoffier did much to enhance the *grande cuisine* that arguably had reached its perfection under Carême. Crediting Carême with providing the foundation for great—that is, French—cooking, Escoffier

simplified the profusion of flavours, dishes and garnishes typifying Carême's work. He also streamlined some of Carême's overly elaborate and fussy procedures and classifications. For example, he reduced Carême's elaborate system of classifying sauces into the five families of sauces still recognized today. Escoffier sought simplicity and aimed for the perfect balance of a few superb ingredients. Some consider his refinement of *grande cuisine* to have been so radical as to credit him with the development of a new cuisine referred to as *cuisine classique* (classic or classical cuisine).

His many writings include *Le Livre des menus* (1912), in which, discussing the principles of a well-planned meal, he analogizes a great dinner to a symphony with contrasting movements that

should be appropriate to the occasion, the guests and the season, and *Ma cuisine* (1934), surveying *cuisine bourgeoise*. But his most important contribution is a culinary treatise intended for the professional chef entitled *Le Guide culinaire* (1903). Still in use today, it is an astounding collection of more than 5000 classic cuisine recipes and garnishes. In it, Escoffier emphasizes the mastery of techniques, the thorough understanding of cooking principles and the appreciation of ingredients—attributes he considered the building blocks professional chefs should use to create great dishes.

Escoffier was honoured as a Chevalier of the French Legion of Honour in 1920 for his work in enhancing the reputation of French cuisine.

## Boxes and Sidebars

Boxes and sidebars present supplementary information, including notes on food history, food in culture and the background of professional food service. This material helps students understand the culinary arts in a wider social context. Extended profiles of Canadian chefs provide an inside look at the philosophy and daily life of successful chefs.

## Tables

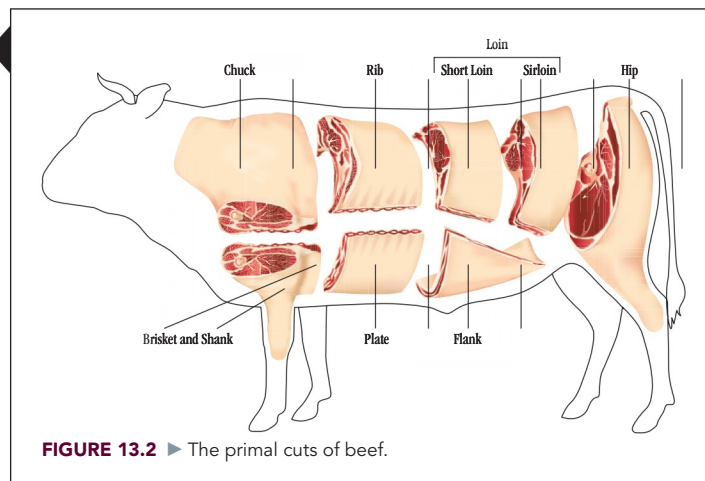
Tables and charts offer visual support and organization of material to enhance students' understanding of the material.

**TABLE 8.1** EGG GRADES

	GRADE A	GRADE B	GRADE C
Albumen	Firm	Watery	Thin and watery
Yolk	Round, well centred	Slightly flattened	Loose
Shell	Clean, no cracks, normal shape	No cracks, but rough texture	May be cracked
Use	Sold at retail markets for household use	Used for commercial baking or further processing	Not sold to consumers; sold to commercial processors for further processing

## Figures

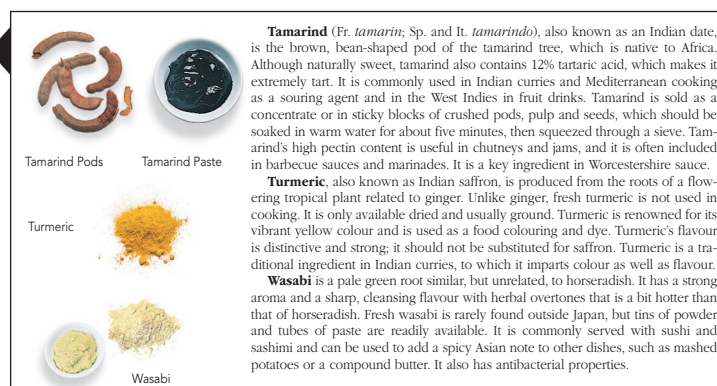
Detailed line drawings illustrate tools and equipment. Illustrations are also used to show students the skeletal structure of meat animals and fish.



**FIGURE 13.2** ▶ The primal cuts of beef.

## Product Identification

Hundreds of original colour photographs help students recognize and identify ingredients. Students can explore a huge variety of items such as fresh herbs, fish, dried spices, game, meats and fine cheeses.



### PROCEDURE FOR SAUTÉING FOODS

- 1 Cut, pound or otherwise prepare the food to be sautéed. Season it and dredge it in flour, if desired.
- 2 Heat a sauté pan and add enough fat (typically, oil) to just cover the pan's bottom.
- 3 Add the food to the sauté pan in a single layer, presentation side down. Do not crowd the pan.
- 4 Adjust the temperature so that the food's exterior browns properly without burning and the interior cooks. The heat should be high enough to complete the cooking process before the food begins to stew in its own juices.
- 5 Turn or toss the food as needed. Avoid burns by not splashing hot fat.
- 6 Cook until done. Doneness is usually determined by timing or touch.

## Procedures

Numbered steps outline the basic procedures that must be mastered. These procedures are often followed by basic recipes that allow students to practise these skills.

### PROCEDURE FOR ROASTING OR BAKING FOODS

- 1 Preheat the oven.
- 2 Cut, trim or otherwise prepare the food to be roasted or baked. Marinate or season as desired. Brush with oil or butter, as appropriate.
- 3 Place the food on a rack or directly in a roasting pan or baking dish.
- 4 Roast the food, generally uncovered, at the desired temperature. **Baste** as necessary.
- 5 Cook to the desired internal temperature or doneness, remembering that many foods will undergo carryover cooking after they are removed from the oven.

**baste** to moisten foods during cooking (usually grilling, broiling or roasting) with melted fat, pan drippings, a sauce or other liquids to prevent drying and to add flavour



- 1 Season the item to be roasted, arrange it in an uncovered pan and place it in a preheated oven.



- 2 Use a thermometer to check the internal temperature of the item being roasted.

#### SAFETY ALERT Cooking with Hot Oil

When hot oil comes into contact with liquid, it can spatter, causing severe burns. Use caution when placing foods into hot fat. When pan-frying, slide food into the heated pan, letting it fall away from you so that splatters do not cause burns. Pat moist foods dry with paper towels before adding them to a deep-fat fryer.

## Illustrated Procedures

Step-by-step colour photographs of various stages in the preparation of dishes and ingredients help students visualize unfamiliar techniques and encourage them to review kitchen activities whenever necessary.

### QUESTIONS FOR DISCUSSION

- 1 Describe the differences between conduction and convection. Identify four cooking methods that rely on both conduction and convection to heat foods. Explain your choices.
- 2 Identify two cooking methods that rely on infrared heat. What is the principal difference between these methods?
- 3 At the same temperature, will a food cook faster in a convection oven or a conventional oven? Explain your answer.
- 4 Describe the process of caramelization and its significance in food preparation. Will a braised food have a caramelized surface? Explain your answer.
- 5 Describe the process of coagulation and its significance in food preparation. Will a pure fat coagulate if heated? Explain your answer.
- 6 Describe the process of gelatinization and its significance in food preparation. Will a pure fat gelatinize? Explain your answer.
- 7 What qualities should be considered when choosing a fat for deep-fat frying?
- 8 List three signs that fryer fat has broken down and should be replaced. What causes fryer fat to break down? What can you do to extend the life of fryer fat?
- 9 Explain the differences between breading and battering foods for deep-fat frying.
- 10 Describe sous vide cooking.
- 11 Itemize the cooling process for a cook-chill system.
- 12 Do sous vide and cook-chill systems mean that less-skilled kitchen staff is needed?
- 13 To reduce calories from fat, which cooking methods are the best to use?

#### MyCulinaryLab

Visit MyCulinaryLab for quizzes, videos, supplementary topics, and this additional recipe:  
Cassis Spheres

## Questions for Discussion

Questions for Discussion appear at the end of each chapter to encourage students to integrate theory and technique into a broader understanding of the material.

## Recipes

### Measurements

All recipes provide both metric and U.S. measurements.

### Step-by-Step Instructions


### Variations

Recipe variations show students how to modify recipes to create new flavour profiles and new dishes.

### LYONNAISE POTATOES

**Yield:** 8 120-g (4-oz.) servings      **Method:** Saut eing

Potatoes, waxy variety	1 kg	2 lb.
Onions, julienne	250 g	8 oz.
Clarified butter	125 mL	4 fl. oz.
Salt and pepper	TT	TT
Parsley, chopped	10 g	1 Tbsp.



**Icons**  
Healthy recipes and vegetarian dishes are indicated with colourful icons.

- 1 Partially cook the potatoes by baking, boiling or steaming. Allow to cool.
- 2 Peel and cut the potatoes into 0.5-cm (0.25-in.) thick slices.
- 3 Saut  the onions in half the butter until tender. Remove the onions from the pan with a slotted spoon and set aside.
- 4 Add the remaining butter to the pan. Add the potatoes and saut , tossing as needed, until well browned on all sides.
- 5 Return the onions to the pan and saut  to combine the flavours. Season to taste with salt and pepper and garnish with parsley.

**VARIATIONS:**  
*Hash Browns*—Shred the potatoes and onions and fry in small batches.  
*O'Brien*—Dice and deep-fry the potatoes and garnish with diced, saut ed onion and red and green peppers.

Approximate values per serving: **Calories** 170, **Total fat** 12 g, **Saturated fat** 7 g, **Cholesterol** 33 mg, **Sodium** 650 mg, **Total carbohydrates** 16 g, **Protein** 1 g

**Finished Dish**  
Some recipes are accompanied by a photograph of the finished dish, allowing students to see what the completed item should look like. These photographs can also help students understand different ways of presenting foods.

### Nutritional Analysis

All recipes include a nutritional analysis prepared specifically for this text.

# ABOUT THE AUTHORS

**Chef Sarah Labensky**, CCP, was Founding Director of the Culinary Arts Institute at Mississippi University for Women (MUW). She taught cooking and management courses and administered the school's four-year baccalaureate degree program in Culinary Arts. Prior to joining MUW's faculty, she was a Professor of Culinary Arts at Scottsdale (Arizona) Community College. Before teaching, Chef Labensky spent many years as a working pastry cook and caterer. In April 2006, Sarah purchased The Front Door and Back Door restaurants, located in downtown Columbus, Missouri. She quickly expanded the operation to add a gourmet retail shop and an evening fine dining restaurant. Sarah purchased The Green Olive Italian Restaurant, located in northwest Columbus, in September 2006. She is active in several professional organizations and is a Past President of the 4000-member International Association of Culinary Professionals.

In her former life, Sarah was a practising attorney, with a J.D. degree from Vanderbilt University. She also holds a B.S. degree in Political Science and Public Administration from Murray (Kentucky) State University and a Culinary Certificate from Scottsdale (Arizona) Community College. She has been repeatedly included in Marquis', *Who's Who in the World*, *Who's Who in America* and *Who's Who of American Women*. Sarah is originally from Murray, Kentucky, and has also lived in Phoenix and Nashville. In addition to good food, Chef Labensky is passionate about travel and animals. She is mom to three Rhodesian Ridgebacks, two Weimaraners and four cats of questionable pedigree.

**Priscilla Martell** is a graduate of Brown University, and currently operates a consulting business called All About Food that services the food, baking and restaurant industries. She's a prolific freelance writer and her articles have appeared in a number of newspapers and magazines, such as *Cooking Light*, *Food and Wine* and *Flavor & Menu*. Priscilla also works with the American Almond Products Company as Culinary Research Director and she has taught as an adjunct at Connecticut Culinary Academy and Boston University. She and her husband, Charlie van Over, opened and ran, for a number of years, an award-winning restaurant called Restaurant du Village in their hometown of Chester, Connecticut.

**Allen "Skip" Hause** is co-owner and directing executive of Fabulous Food, which he and his wife founded in 1995 to fulfil their vision of unique custom catering. A graduate of New York's renowned Culinary Institute of America, Skip has stellar credentials in all facets of the culinary world. His experience includes the noted Williamsburg Inn (Williamsburg, Virginia), corporate work for Omni International Hotels (Atlanta, Georgia) and 16 years as Executive Chef for a leading Phoenix catering company. As Fabulous Food's Executive Chef, Skip oversees all aspects of the business. He is ably assisted by an exceptional kitchen and planning staff, whose combined talents are the reason the company earns its name in both taste and presentation.

**Fred Malley's** career includes being an educator, chef, food and beverage manager, caterer and food stylist. His passion for food began early in life and has continually evolved. He instructed aspiring culinarians at SAIT Polytechnic in Calgary and mentors chefs for professional designation. Curriculum development is a particular interest; as a director of the Canadian Tourism Human Resource Council, he was actively involved in the development of National Occupational Standards for professional cook, line cook, kitchen helper, food and beverage manager and entry-level cook training. He recently worked as a curriculum validation expert for Alberta's Apprenticeship and Industry Training to create content modules for



cook training. Chef Malley co-authored *Food Safety and Sanitation* (SAIT), collaborated on *Fundamentals of Canadian Cheeses and Their Uses in Fine Cuisine* (Dairy Farmers of Canada) and provided input on Alberta's Apprentice Cook outline and exams. As a director of the Canadian Federation of Chefs & Cooks, he chaired the Canadian Culinary Institute, the body responsible for professional certification of chefs throughout Canada, for five years.

Chef Malley is a certified chef de cuisine (CCC) and a DACUM facilitator; he is also certified for Evolutive Cuisine with Canadian Cheeses (ECCC) with distinction. Fred is active in the Alberta Culinary Arts Foundation and was a support member for Culinary Team Alberta in 1996 and 2008. He holds a degree in adult education. His food styling appears internationally for major corporations and he has written about chefs and food for *Culinaire Magazine*. He is currently the president of the Calgary Academy of Chefs and Cooks.

**Anthony Bevan**, CCC, a native of Dublin, Ireland, graduated from the Dublin Institute of Technology's culinary program and continued his culinary training in Basel, Switzerland. Returning to Ireland, he worked his way through the ranks and became the youngest Executive Chef in a high-quality hotel. He led the culinary brigades of other fine hotels and restaurants until finally opening his own restaurant called Knocklofty House in Tipperary, Ireland.

Chef Bevan moved to Canada and joined the culinary faculty team at Cambrian College, Sudbury, eventually becoming the Coordinator for Hospitality Studies. During his 10 years there, his achievements included winning the Teaching Excellence Award, being awarded an Aboriginal name (*Gaage Aan Kwod*, meaning "Clear Sky"), helping to establish Canada's accredited Aboriginal Culinary Program and Aboriginal Hotel Lodge Management DIP Program and writing a column for the *Sudbury Star*.

In 1997, Chef Bevan joined the team at Humber College in Toronto. While there, he designed and implemented the Ontario Youth Apprenticeship Program (OYAP) for cooks; received the College Innovation of the Year Award; chaired the Curriculum Advisory Committee for the trade of cook for the Ministry of Training, Colleges and Universities; conceived, designed and led the development of Ontario's Chef Apprenticeship program; and hosted a television show called *School of Chef*.

In 2010, Chef Bevan became head of the Culinary School at Georgian College in Owen Sound, Ontario, where he places an emphasis on local, sustainable, fresh, chemical-free foods. He also devotes time to creating national and international work placements for students and graduates of the culinary programs and continues his partnerships with First Nations community initiatives.

**Settimio Sicoli** graduated from the University of Victoria with majors in anthropology and psychology. His culinary journey began when he enrolled in the Professional Cook Training program at Vancouver Community College. He continued his culinary training in Europe, at the Hilton International Hotel in Mainz, Germany. Returning to Canada, he joined the kitchen brigade at the University Club of Vancouver, attaining the position of Executive Chef.

Chef Sicoli joined the faculty of Vancouver Community College's Culinary Arts Department in 1987. He has held the positions of Assistant Department Head and Department Head of Culinary Arts, and is the former associate dean of the Tourism, Hospitality, and Business Division. He was a mentor to the CCFCC Junior National Team, composed entirely of VCC graduates, which garnered silver medals in both the cold and hot IKA World Culinary Olympics held in Erfurt, Germany, in October 2012. In promoting successes for future culinarians, he always stressed the importance of three points: Passion, Commitment and Attitude—with these beliefs fully entrenched, whether a young culinary student starting a career or an established chef, success will surely follow.

Chef Sicoli has been active for years in many professional associations. He is past president and chair of the British Columbia Chefs' Association and chef director on the Vancouver branch's board. He is also the founding director of British

Columbia's Culinary Arts Foundation and former first vice president of Canadian Chef Educators. He has been director of both the B.C. Restaurant "FoodService Expo" and the Annual Food and Beverage Conference, chairman of the Provincial Cook Training Articulation Committee and board member of the Industry Training Advisory Commission (ITAC). In 2013, Chef Sicoli was honoured by the B.C. Chef's Association (CCFCC Vancouver Branch) as the recipient of their Lifetime Achievement Award.

After over 40 years in the Culinary Hospitality field, including 28 years at Vancouver Community College in both instructional and leadership roles, Chef Sicoli officially retired in 2014 and moved from Vancouver to Kelowna, B.C. in the sunny Okanagan Valley. He and his wife, Carol, now enjoy a steady summer stream of visits from family and friends, especially the quality time with their four grandchildren. Chef Sicoli still enjoys the pleasure of cooking every day, utilizing the freshest ingredients available, and continues to remain committed and connected to his culinary profession.

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# PROFESSIONALISM



**After studying this chapter you will be able to:**

- name key historical figures responsible for developing food service professionalism
- discuss the development of the modern food service industry
- explain the organization of classical and modern kitchen brigades
- explain the role of the professional chef in modern food service operations
- identify the attributes an apprentice or student cook needs to become a professional chef

**GREAT COOKERY REQUIRES TASTE AND CREATIVITY**, an appreciation of beauty and a mastery of technique. Like the sciences, successful cookery demands a certain level of knowledge and an understanding of basic principles. And, as with any vocation, today's professional chefs must exercise sound judgment and be committed to achieving excellence in their endeavours.

This text describes foods and cooking equipment, explains culinary principles and cooking techniques and provides recipes utilizing these principles and techniques. This text cannot, however, provide taste, creativity, commitment and judgment. For these you and all culinary professionals must strive for excellence and have the drive to succeed.

## CHEFS AND RESTAURANTS

Cooks have produced food in quantity for as long as people have eaten together. For millennia, chefs have catered to the often elaborate dining needs of the wealthy and powerful, whether they be Asian, indigenous Canadian, European or African. And for centuries, vendors in China, Europe and elsewhere have sold to the public foods they prepared themselves or bought from others.

But the history of the professional chef is of relatively recent origin. Its cast is mostly French, and it is intertwined with the history of restaurants. For only with the development of restaurants during the late 18th and early 19th centuries were chefs expected to produce, efficiently and economically, different dishes at different or the same times for different diners.

### DEFINING THE KEY TERMS

**Cookery**—The art, practice or work of cooking.

**Cooking**—(1) The transfer of energy from a heat source to a food; this energy alters the food's molecular structure, changing its texture, flavour, aroma and appearance; (2) the preparation of food for consumption.

**Professional cooking**—A system of cooking based on a knowledge of and appreciation for ingredients and procedures.

### The 18th Century—Boulangier's Restaurant

The word "restaurant" is derived from the French word *restaurer* (to restore). Since the 16th century, the word "restorative" had been used to describe rich and highly flavoured soups or stews capable of restoring lost strength. Restoratives, like all other cooked foods offered and purchased outside the home, were made by guild members. Each guild had a monopoly on preparing certain food items. For example, during the reign of Henri IV of France (1553–1610), there were separate guilds for *rôtisseurs* (who cooked *la grosse viande*, the main cuts of meat), *pâtissiers* (who cooked poultry, pies and tarts), *tamisiers* (who baked breads), *vinaigriers* (who made sauces and some stews, including some restoratives), *traiteurs* (who made ragouts) and *porte-chapes* (caterers who organized feasts and celebrations).

The French claim that the first modern restaurant opened one day in 1765 when a Parisian tavernkeeper, a Monsieur Boulangier, hung a sign advertising the sale of his special restorative, a dish of sheep feet in white sauce. His establishment closed shortly thereafter as the result of a lawsuit brought by a guild whose members claimed that Boulangier was infringing on their exclusive right to sell prepared dishes. Boulangier triumphed in court and later reopened.

Boulangier's establishment differed from the inns and taverns that had existed throughout Europe for centuries. These inns and taverns served foods prepared (usually off-premises) by the appropriate guild. The food—of which there was little choice—was offered by the keeper as incidental to the establishment's primary function: providing sleeping accommodations or drink. Customers were served family-style and ate at communal tables. Boulangier's contribution to the food service industry was to serve a variety of foods prepared on premises to customers whose primary interest was dining.

Several other restaurants opened in Paris during the succeeding decades, including the Grande Taverne de Londres in 1782. Its owner, Antoine Beauvilliers

(1754–1817), advanced the development of the modern restaurant by offering his wealthy patrons a menu listing available dishes during fixed hours. Beauvilliers's impeccably trained wait staff served patrons at small, individual tables in an elegant setting.

The French Revolution (1789–1799) had a significant effect on the budding restaurant industry. Along with the aristocracy, guilds and their monopolies were generally abolished. The revolution also allowed the public access to the skills and creativity of the well-trained, sophisticated chefs who had worked in the aristocracy's private kitchens.

## The Early 19th Century—Carême and *Grande Cuisine*

As the 19th century progressed, more restaurants opened, serving a greater selection of items and catering to a wider clientele. By mid-century, there were several large, grand restaurants in Paris serving elaborate meals, decidedly reminiscent of the *grande cuisine* (also known as *haute cuisine*) of the aristocracy. **Grande cuisine**, which arguably reached its peak of perfection in the hands of Antonin Carême, was characterized by meals consisting of dozens of courses of elaborately and intricately prepared, presented, garnished and sauced foods. Other restaurateurs blended the techniques and styles of *grande cuisine* with the simpler foods and tastes of the middle class (*cuisine bourgeoise*) to create a new cuisine simpler than *grande cuisine* but more than mere home cooking.

**grande cuisine** the rich, intricate and elaborate cuisine of the 18th- and 19th-century French aristocracy and upper classes. It is based on the rational identification, development and adoption of strict culinary principles. By emphasizing the how and why of cooking, *grande cuisine* was the first to distinguish itself from regional cuisines, which tended to emphasize the tradition of cooking

## The Late 19th Century—Escoffier and *Cuisine Classique*

Following the lead set by the French in both culinary style and the restaurant business, restaurants opened in the Americas and throughout Europe during the 19th century. Charles Ranhofer (1836–1899) was the first internationally renowned chef of an American restaurant, Delmonico's, in New York City. In 1893 Ranhofer published his “franco-american” encyclopedia of cooking, *The Epicurean*, containing more than 3500 recipes.

One of the finest restaurants outside France was the dining room at London's Savoy Hotel, opened in 1898 under the directions of César Ritz (1850–1918) and Auguste Escoffier. Escoffier is generally credited with refining the *grande cuisine* of Carême to create *cuisine classique* or **classic cuisine**. By doing so, he brought French cuisine into the 20th century.

**classic cuisine** a late 19th- and early 20th-century refinement and simplification of French *grande cuisine*. Classic (or classical) cuisine relies on the thorough exploration of culinary principles and techniques, and emphasizes the refined preparation and presentation of superb ingredients

## The Mid-20th Century—Point and *Nouvelle Cuisine*

The mid-20th century witnessed a trend toward lighter, more naturally flavoured and more simply prepared foods. Fernand Point was a master practitioner of this movement. But this master's goal of simplicity and refinement was carried to even greater heights by the generation of chefs Point trained: principally, Paul Bocuse, Jean and Pierre Troisgros, Alain Chapel, François Bise and Louis Outhier. They, along with Michel Guérard and Roger Vergé, were the pioneers of **nouvelle cuisine** in the early 1970s.

The *nouvelle cuisine* philosophy is premised on the rejection of overly rich, needlessly complicated dishes. These chefs emphasize healthful eating. The ingredients must be absolutely fresh and of the highest possible quality; the cooking methods should be simple and direct whenever possible. The accompaniments and garnishes must be light and must contribute to an overall harmony; the completed plates must be elegantly designed and decorated. Following these guidelines, some traditional cooking methods have been applied to untraditional ingredients, and ingredients have been combined in new and previously unorthodox fashions. For chefs with taste, skill, knowledge and judgment, this works.

**nouvelle cuisine** French for “new cooking”; a mid-20th-century movement away from many classic cuisine principles and toward a lighter cuisine based on natural flavours, shortened cooking times and innovative combinations

## The Late 20th Century—Regional, Slow Food and Fusion Cuisine

The late 20th century was characterized by a resurgence in regional cuisine with the emphasis on sourcing the best of local, seasonal products. Producers and

## MARIE-ANTOINE (ANTONIN) CARÊME (1784–1833)

Carême, known as the “cook of kings and the king of cooks,” was an acknowledged master of French *grande cuisine*. Abandoned on the streets of Paris as a child, he worked his way from cook’s helper in a working-class restaurant to become one of the most prestigious chefs of his (or, arguably, any other) time. During his career he was chef to the famous French diplomat and gourmand Talleyrand, the Prince Regent of England (who became King George IV), Tsar Alexander I of Russia and Baron de Rothschild, among others.

His stated goal was to achieve “lightness,” “grace,” “order” and “perspicuity” in the preparation and presentation of food. As a *pâtissier*, he designed and prepared elaborate and elegant pastry and confectionery creations, many of which were based on architectural designs. (He wrote that “the fine arts are five in number, namely: painting, sculpture, poetry, music, architecture—the main branch of

which is confectionery.”) As a showman, he garnished his dishes with ornamental *hatelets* (skewers) threaded with colourful ingredients such as crayfish and intricately carved vegetables, and presented his creations on elaborate *socles* (bases). As a *saucier*, he standardized the use of roux as a thickening agent, perfected recipes and devised a system for classifying sauces. As a *garde-manger*, Carême popularized cold cuisine, emphasizing moulds and aspic dishes. As a culinary professional, he designed kitchen tools, equipment and uniforms.

As an author, he wrote and illustrated important texts on the culinary arts, including *Le Maître d’hôtel français*



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(1822), describing the hundreds of dishes he had personally created and cooked in the capitals of Europe; *Le Pâtissier royal parisien* (1825), containing fanciful designs for *les pièces montées*, the great decorative centrepieces that were the crowning glory of grand dinners; and his five-volume masterpiece on the state of his profession, *L’Art de la cuisine au XIXe siècle* (1833), the last two volumes of which were completed after his death by his associate, Plumerey. Carême’s writings almost single-handedly refined and summarized 500 years of culinary evolution. But his treatises were not mere cookbooks. Rather, he analyzed cooking, old and new, emphasizing procedure and order and covering every aspect of the art known as *grande cuisine*.

Carême died before the age of 50, burnt out, according to Laurent Tailhade, “by the flame of his genius and the coal of the spits.”

chefs became partners. Marcel Kretz pioneered this concept in Canada while at La Sapinière in Quebec. Chez Panisse’s Alice Waters led the American front, which included local producers raising many commodities previously imported (e.g., foie gras). Simple preparations highlighting organic foods’ natural flavours were preferred.

Coupled with regionalism is the Slow Food movement. Started in 1986 by Carlo Petrini to counteract the proliferation of fast food, the Slow Food movement has spread globally from its origins in Rome. Its goals are to protect cultural regional food and drink and encourage the use of local ingredients. The use of local ingredients is now mainstream for many restaurants in Canada in addition to suppliers and stores. Heirloom ingredients are sought out for their superior flavours. In 2004, Petrini and Massimo Montanari spearheaded the creation of the University of Gastronomic Sciences in Piedmont and Emilia-Romagna, Italy. The goal is to promote an awareness of good food and nutrition while sustaining ecological balances within an ecosystem.

A concept called **fusion cuisine** evolved during this time. Ingredients or methods from one region or ethnic base are combined with those of another; for example, a duck confit is flavoured with lemon grass, ginger and chiles. A thorough knowledge of ingredients and flavours is necessary to successfully create a great fusion dish. Vietnamese and Malaysian cuisines are excellent examples of fusion. The French influence in Vietnam and the melding of Indian, Chinese and Malay/Indonesian cooking created fusion cuisines.

Beginning in the 1990s, chefs began to seriously explore the scientific aspect of cooking. The French scientist Hervé This coined the term **molecular gastronomy** to describe the re-engineering of cooking using industrial concepts and machines. Ferran Adrià of Spain’s elBulli restaurant is the founding chef of this method of cooking. Hallmarks include superb quality ingredients, intense flavours, dehydrators, espumas, spherification and freezer technologies.

**fusion cuisine** the blending or use of ingredients and/or preparation methods from various ethnic, regional or national cuisines in the same dish; also known as *transnational cuisine*

**molecular gastronomy** a contemporary scientific movement that investigates the chemistry and physics behind the preparation of foods and dishes

## AUGUSTE ESCOFFIER (1846–1935)

Escoffier's brilliant culinary career began at the age of 13 in his uncle's restaurant and continued until his death at the age of 89. Called the "Emperor of the world's kitchens," he is perhaps best known for defining French cuisine and dining during *La Belle Époque* (the "Gay Nineties").

Unlike Carême, Escoffier never worked in an aristocratic household. Rather, he exhibited his culinary skills in the dining rooms of the finest hotels in Europe, including the Place Vendôme in Paris and the Savoy and Carlton Hotels in London.

Escoffier did much to enhance the *grande cuisine* that arguably had reached its perfection under Carême. Crediting Carême with providing the foundation for great—that is, French—cooking, Escoffier

simplified the profusion of flavours, dishes and garnishes typifying Carême's work. He also streamlined some of Carême's overly elaborate and fussy procedures and classifications. For example, he reduced Carême's elaborate system of classifying sauces into the five families of sauces still recognized today. Escoffier sought simplicity and aimed for the perfect balance of a few superb ingredients. Some consider his refinement of *grande cuisine* to have been so radical as to credit him with the development of a new cuisine referred to as *cuisine classique* (classic or classical cuisine).

His many writings include *Le Livre des menus* (1912), in which, discussing the principles of a well-planned meal, he analogizes a great dinner to a symphony with contrasting movements that

should be appropriate to the occasion, the guests and the season, and *Ma cuisine* (1934), surveying *cuisine bourgeoise*. But his most important contribution is a culinary treatise intended for the professional chef entitled *Le Guide culinaire* (1903). Still in use today, it is an astounding collection of more than 5000 classic cuisine recipes and garnishes. In it, Escoffier emphasizes the mastery of techniques, the thorough understanding of cooking principles and the appreciation of ingredients—attributes he considered the building blocks professional chefs should use to create great dishes.

Escoffier was honoured as a Chevalier of the French Legion of Honour in 1920 for his work in enhancing the reputation of French cuisine.

## The 21st Century—The Farm-to-Table (or Locavore) Movement and Celebrity Chefs

The 21st century has begun with a rethinking of menu building not only to recognize the vast array of ingredients available, but also to reduce its ecological footprint and enhance sustainability. While chefs are sourcing ingredients globally, they are also working in tandem with local farmers to supply their diners with fresh flavours while supporting local agriculture and preserving heirloom varieties. The concern for locally raised ingredients, referred to as the **farm-to-table (or locavore) movement**, has influenced chefs to serve fresh seasonal foods, such as wild greens or pastured pork, that are produced near the location of their restaurants.

In addition to supporting local growers and reducing reliance on imports, sustainability is at the core of the farm-to-table philosophy, coupled with a desire to create a smaller carbon footprint. Many local farmers offer organic, no-added chemical or added hormone products. Supporting local farmers and producers enhances the local economy, despite the restaurateur usually paying higher commodity prices, which are passed on to diners. Chefs take pride in recognizing their suppliers on their menus.

**farm-to-table (or locavore) movement** an awareness of the source of ingredients with an emphasis on serving locally grown and minimally processed foods in season

## FERNAND POINT (1897–1955)

A massive man with a monumental personality, Point refined and modernized the classic cuisine of Escoffier. By doing so, he laid the foundations for nouvelle cuisine.

Point received his early training in some of the finest hotel-restaurant kitchens in Paris. In 1922 he and his family moved to Vienne, a city in southeast France near Lyon, and opened a restaurant. Two years later his father left the restaurant to

Fernand, who renamed it *La Pyramide*. During the succeeding years it became one of the culinary wonders of the world.

Point disdained dominating sauces and distracting accompaniments and garnishes. He believed that each dish should have a single dominant ingredient, flavour or theme; garnishes must be simple and match "like a tie to a suit." Procedure was of great importance. He devoted equal efforts to fry-

ing an egg and creating the marjolaine (a light almond and hazelnut sponge-cake filled with chocolate and praline buttercreams). His goal was to use the finest of raw ingredients to produce perfect food that looked elegant and simple. But simplicity was not easy to achieve. As he once said, "A béarnaise sauce is simply an egg yolk, a shallot, a little tarragon vinegar, and butter, but it takes years of practice for the result to be perfect."



## FERRAN ADRIÀ (1962– )

*Cooking is a language through which all the following properties may be expressed: harmony, creativity, happiness, beauty, poetry, complexity, magic, humour, provocation and culture.*

—Ferran Adrià

Ferran Adrià is an experimental Spanish chef called the Salvador Dalí of the kitchen. Adrià's restaurant, elBulli (slang for "the bulldog"), was voted World's Best Restaurant four times by Britain's *Restaurant* magazine. ElBulli also had three Michelin stars, the highest rating, an award it maintained since 1997.

Born near Barcelona, this food futurist planned a business career before a temporary dishwashing job redirected his path. Inspired by classic cuisine and an encouraging chef, Adrià began his self-education, reading from cover to cover *El Práctico*, a cooking manual edited by a Spanish chef heavily influenced by Escoffier. A month working at elBulli, a prestigious resort restaurant in the tiny town of Roses on the Costa Brava, was an experience so stimulating that he returned there upon completion of his military service in 1984.

At the time, the cuisine at elBulli was heavily influenced by nouvelle cuisine, then at its height. Working alongside the restaurant's chef, Adrià created new versions of acclaimed French dishes, earning the restaurant its first star in the influential Michelin Guide. He enhanced his skills and knowledge of classic technique through brief apprenticeships in top kitchens in France. But in 1987, Adrià heard an expression that was to change his direction as a chef. "Creativity means not copying," said Jacques Maximin, then chef of Le Chanticleer in Nice, France. At that moment Adrià and his team committed themselves to reinventing cuisine as we know it.

The food served at elBulli engaged all of one's senses. Dinner was a tasting menu of up to 35 bite-sized dishes. What appeared to be cooked may actually have been flash frozen. A herb clipped to a spoon allowed guests to smell the aroma before tasting the herb in the dish. Warm foam that tasted of carrots or mushrooms, hot gelatin, encapsulated mango purée that resembled egg yolks and ravioli filled with liquid were some of the show-stopping techniques for which Adrià became known. At the vanguard of experimental cooking, Adrià and staff spent six months each

year working with food technologists, industrial designers and artists experimenting with new techniques. The chef and his staff documented their style of cooking in a 23-point synthesis. Using the freshest ingredients and mastery of technique are givens, they write. But all foods are of equal gastronomic value, with a preference for vegetables and seafood to create a "light, harmonic cuisine" based on classic and modern technologies.

Among those who have worked at elBulli, Chef Grant Achatz of Alinea in Chicago and Chef Wylie Dufresne of wd50 in New York City have become leaders in this emerging modern style of cooking. Indicative of the appeal of this challenging cuisine, millions of prospective customers vied for one of only 8000 seats at the restaurant each year.

In 2011, Adrià closed elBulli and opened the Foundation. It is a centre dedicated to research, innovation and technology. All information will be shared on the Internet in La Bullipedia, which is expected to launch in 2016. ElBulli's recipe research serves as the core for the database that will catalogue food and its preparation from a scientific and emotional perspective, among others.

The concept of the 100-mile diet was explored by a couple from British Columbia, online starting in 2006, in a book published in 2007, and in a TV show in 2009. The couple chronicled their story of eating only food sourced within 100 miles of their home. They relied heavily on farmers' markets and on visiting local farms. It helped that they lived in Vancouver, which has available an abundance of locally harvested food from the ocean, rivers, market gardens and farms in the fertile Fraser Delta, with its moderate climate.

Purchasing food grown within 100 miles of a restaurant is not practical for most of the year in Canada due to the harsh winters, the short growing season and geographical factors. Product sold in farmers' markets is not necessarily local and often has limited supply. Many retailers sell value-added items, while some shop owners supplement their offerings with product purchased on the open market. Canadian restaurants rely on sourcing much of their local produce from greenhouse facilities and some grow their own herbs and microgreens. Chefs must make choices among suppliers based on what their diners expect and are willing to either forego or pay for. Generally, there are not enough local suppliers to meet the demand by both restaurants and the purchasing public. Chefs today focus on local, regional and often seasonal foods and most supplement with ingredients from elsewhere.

Seasonality is a major factor for most produce, and restaurateurs who purchase local have revived the practice of canning produce while it is in season. This is not unlike what your grandparents and their predecessors did as a part of everyday

living. The size of the carbon footprint associated with purchasing local is a source of debate due to the inefficiencies of small production and the resources required to deliver the product to market. However, it is difficult to deny that a carrot grown locally in organic soil and eaten on the same day it was harvested does, in fact, taste better.

Also, in the 21st century, many chefs have been elevated to celebrity status; an entire cable television network is devoted to cooking. Bookstore and library shelves are jammed with cookbooks, and newspapers and magazines regularly review restaurants and report on culinary trends. With gourmet shops and cookware stores in most malls, cooking has become both a hobby and a spectator sport. All this has helped inspire a generation of Canadian teenagers to pursue careers behind the stove—and in front of the camera.

## INFLUENCES ON MODERN FOOD SERVICE OPERATIONS

From Monsieur Boulanger's humble establishment, a great industry has grown. Today there are more than 92 000 food service operators in Canada and they employ 6.5% of the workforce. The dramatic growth and diversification of the food service industry are due in part to the Industrial Revolution and the social and economic changes it wrought, including the introduction of new technologies, foods, concerns and consumers.

### New Technologies

Technology has always had a profound effect on cooking. For example, the development of clay and, later, metal vessels that could contain liquids and withstand as well as conduct heat offered prehistoric cooks the opportunity to stew, make soups and porridge, pickle and brine foods and control fermentation. But it was not until the rapid technological advances fostered by the Industrial Revolution that anything approaching the modern kitchen was possible.

One of the most important advancements was the introduction of the cast-iron stove. Prior to the 19th century, most cooking was done on spits or grills or in cauldrons or pots set on or in a wood- or coal-burning hearth. Hearth-side cooking did not lend itself well to the simultaneous preparation of many items or to items requiring constant and delicate attention. With the introduction of cast-iron stoves during the 1800s (first wood- and coal-burning, then, by mid-century, gas and, by the early 20th century, electric), cooks could more comfortably and safely approach the heat source and control its temperatures. Cooks were also able to prepare efficiently and hold for later use or service a multitude of smaller amounts of items requiring different cooking methods or ingredients. This is a necessity at a restaurant simultaneously catering to different diners' demands.

Also of great importance were developments in food preservation and storage techniques. For thousands of years, food had been preserved by sun-drying, salting, smoking, pickling, sugar-curing or fermenting. Although useful, these procedures destroy or distort the appearance and flavour of most foods. By the early 19th century, preserving techniques that had minimal effect on appearance and flavour began to emerge. For example, by 1800 the Frenchman François Appert successfully "canned" foods by subjecting foods stored in sterilized glass jars to very high heat. An early mechanical refrigerator was developed by the mid-1800s; soon reliable iceboxes, refrigerators and, later, freezers were available. During the 20th century, freeze-drying, vacuum-packing and irradiation became common preservation techniques.

While advancements were being made in preservation and storage techniques, developments in transportation technology were also underway. During the 19th century, steam-powered ships and railroads were able to bring foods quickly to

## SAFETY ALERT

### Epidemics

The beginning of the 21st century has seen a number of agricultural anomalies. Outbreaks of BSE (bovine spongiform encephalopathy) and avian flu and concerns over the safety of aquaculture salmon have caught consumer attention. Producers and governments globally have taken steps to contain or control these outbreaks. Food recalls are common, some of which cost processors millions of dollars when food safety protocols are breached.

market from distant suppliers. Indeed, by the early 1900s, live Atlantic oysters were available on the western plains. During and since the 20th century, temperature-controlled cargo ships, trains, trucks and airplanes all have been used as part of an integrated worldwide food transportation network.

Combined with dependable food preservation and storage techniques, improved transportation networks have freed chefs from seasonal and geographic limitations in their choice of foods and have expanded consumers' culinary horizons.

Engineering advancements also have facilitated or even eliminated much routine kitchen work. Since the start of the Industrial Revolution, chefs have come to rely increasingly on mechanical and motorized food processors, mixers and cutters, as well as a wealth of sophisticated kitchen equipment such as high-carbon stainless steel knife blades, microwave ovens, convection steamers, programmable combitherm ovens, infrared thermometers and induction cooktops. More recently, new computer technologies have made managing restaurant kitchens more efficient. And with easy access to the Internet, chefs can now source ingredients from a world of suppliers.

## New Foods

Modern food preservation, storage and transportation techniques have made both fresh and exotic foods regularly available to chefs and consumers. Many of these foods are themselves more wholesome as the result of progress in agriculture and animal husbandry.

Advancements in agriculture such as the switch from organic to chemical fertilizers and the introduction of pesticides and drought- or pest-resistant strains have resulted in increased yields of crops. Traditional hybridization techniques and, more recently, genetic engineering have produced new or improved grains and, for better or for worse, fruits and vegetables that have a longer shelf life and are more amenable to mass-production handling, storage and transportation methods. There is increased opposition among the public, with Europe at the forefront, against consuming genetically modified food products. The concern is the residue of pesticides and herbicides that linger in the crop. We have seen an increase in the incidence of chronic disease that mirrors the introduction of these agricultural products coupled with huge increases in sugar consumption.

Likewise, advancements in animal husbandry and aquaculture have led to a more reliable supply of leaner meat, poultry and fish. Moreover, foods found traditionally only in the wild (for example, game, wild rice and many mushrooms) are now raised commercially and are routinely available.

Food preservation and processing techniques have led to the development of quality packaged, prepared convenience foods. Today's chef can rely on many of these products. They allow greater flexibility and more time to devote to other preparations.

## New Concerns

Consumer concerns about nutrition and diet have fuelled changes in the food service industry. Obviously, what we eat affects our health. Adequate amounts of nutrients promote good health by preventing deficiencies and chronic diseases and increasing longevity.

The public has long been concerned about food safety. Federal, provincial and local governments have helped promote food safety by inspecting and grading meats and poultry, regulating label contents for packaged foods and setting sanitation standards. All these standards, especially sanitation standards, affect the way foods are prepared, stored and served.

Concerns about nutrition and food safety have resulted in renewed interest in organically grown fruits and vegetables and free-range-raised animals. Consumers are more aware of additives and preservatives used in commercial food production and also of the ingredients themselves. There is a growing population sourcing fewer processed foods and dismissing those foods with ingredients they don't recognize.

Sugar, in particular, is added to many processed foods, often using a name consumers are not familiar with—in other words, hidden sugars. Yet they are marketed as healthy choices.

## New Consumers

Demographic and social changes have contributed to the diversification of the food service industry by creating or identifying new consumer groups with their own desires or needs. By tailoring their menu, prices and decor accordingly, food service operations cater to consumers defined by age (baby boomers and seniors, in particular, and now millennials), type of household (singles, couples and families), income, education and geography.

Since the 20th century, especially in the decades following World War II, there has also been a rapid increase in the number and type of institutions providing food services. These include hospitals, schools, retirement centres, hotels and resorts (which may, in turn, have fine dining, coffee shop, banquet and room service facilities), factories, camps and office complexes. Each of these institutions presents the professional chef with unique challenges, whether they be culinary, dietary or budgetary.

Through travel, television or exposure to the many books and magazines about food, consumers are better educated and more sophisticated. Educated consumers provide a market for new foods and cuisines (**global, national, regional and ethnic**) as well as an appreciation for a job well done.

Although some consumers may frequent a particular restaurant because its chef or owner is a celebrity or the restaurant is riding high on a crest of fad or fashion, most consumers choose a restaurant—whether it be a quick service burger place or an elegant fine-dining restaurant—because it provides quality food at a cost they are willing to pay. To remain successful, then, the restaurant must carefully balance its commitment to quality with marketplace realities.

**global cuisine** foods (often commercially produced items) or preparation methods that have become ubiquitous throughout the world; for example, curries and french-fried potatoes

**national cuisine** the characteristic cuisine of a nation

**regional cuisine** a set of recipes based upon local ingredients, traditions and practices; within a larger geographical, political, cultural or social unit, regional cuisines are often variations of one another that blend together to create a national cuisine

**ethnic cuisine** the cuisine of a group of people having a common cultural heritage, as opposed to the cuisine of a group of people bound together by geography or political factors

## THE FOOD SERVICE OPERATION

To function efficiently, a food service operation must be well organized and staffed with appropriate personnel. This staff is traditionally called a **brigade**. Currently we refer to the “team,” and sometimes the chef’s title is kitchen leader. Although a chef will be most familiar with the back of the house or kitchen brigade, he or she should also understand how the dining room or front of the house operates. Staffing any food service facility ultimately depends on the type and complexity of the menu. (Types and styles of menus are discussed in Chapter 4, Menu Planning and Food Costing.)

**brigade** a system of staffing a kitchen so that each worker is assigned a set of specific tasks; these tasks are often related by cooking method, equipment or the types of foods being produced

## The Modern Kitchen Brigade

Today most food service operations utilize a simplified version of Escoffier’s kitchen brigade.

The *executive chef*, working chef or kitchen leader is a team player who coordinates kitchen activities and directs the kitchen staff’s training and work efforts. Taking into consideration factors such as food costs, food availability and popularity as well as labour costs, kitchen skills and equipment, the executive chef plans menus and creates recipes. He or she sets and enforces nutrition, safety and sanitation standards and participates in (or at least observes) the preparation and presentation of menu items to ensure that quality standards are rigorously and consistently maintained. The chef or kitchen leader may also be responsible for purchasing food items and, often, equipment. In some food service operations, the executive chef may assist in designing the menu, dining room and kitchen. He or she also educates the dining room staff so that they can correctly answer questions about the menu. The chef may also work with food purveyors to learn about new food items and