

What Are Good Manufacturing Practices (GMPs)?

Good Manufacturing Practices (GMPs) (or Prerequisite Programs) are common-sense practices for creating the conditions required to prevent, minimize or control microbial, chemical and physical contamination in a food production environment.

There are four basic elements in a GMP food safety program. Each is based on the principle of risk reduction through prevention. They include:

- Control Programs—written operational and training policies and descriptions of the resulting operational and training procedures, which are applied during Training and through Operational Controls
- Training—the training procedures
- Operational Controls—the operational procedures in the food production facility
- Environmental Controls—creation of a physical environment favourable for the production of safe food.

What is the Difference between GMPs and Prerequisite Programs?

The terms “Good Manufacturing Practices” and “Prerequisite Programs” are interchangeable. The term “Good Manufacturing Practices” is used throughout this guidebook.

Why Apply GMPs?

Food safety is not an option; it’s an obligation. The market demands it. Those who fail to provide safe food risk loss of market share, loss of reputation and potential liability costs. Proof of compliance with food safety programs is increasingly becoming a condition of purchase by retailers.

Facing societal costs such as additional health care costs and lost productivity resulting from foodborne illnesses, governments are becoming less tolerant of processors that sell contaminated food. In some jurisdictions (e.g., the United States), GMPs are a regulatory requirement.

Since their creation for NASA in the early 1960s, GMPs have proven to be an effective method of reducing food safety risks in processing facilities all over the world.

Why Create a GMP Guidebook?

GMP material exists in many different formats and in many different places. Often, descriptions of expectations are vague (e.g., “adequate,” “proper”) and there are few specifics as to how to achieve “adequate” or “proper.” This fragmentation makes it difficult and time consuming for processors to gather all the information necessary to begin a GMP in their facility.

By consolidating food safety explanations, suggestions and options into one document, OMAFRA provides a single reference for fruit and vegetable processors that wish to initiate a food safety program.

How to Use This GMP Guidebook

Each chapter in this guidebook is designed to stand alone. The advantage of this format is that a reader can choose any section of the guidebook and access a full discussion of the selected topic. The disadvantage to this approach is that it creates repetition between sections.

The guidebook is divided into seven sections:

- Preface
- Background
- Environmental Controls
- Operational Controls
- Written Programs
- Training
- Self-Assessment.

The Environmental Controls and Operational Controls sections follow the format and numbering used by OMAFRA’s GMP Advantage program manual. **Each heading in these sections begins with the *GMP Advantage* standard in bold print.** Rather than repeat the identical standard for each required individual written and training program, **the written program standard and the training program standard are presented in bold print only once at the beginning of their respective sections.** The remainder of each section provides suggestions and options as to how to achieve the standard required by *GMP Advantage*.

Preface

The **Background** section discusses the types of contamination commonly found in minimally processed foods of plant origin and the extent of foodborne illnesses. The rationale for implementation of a food safety program follows, with a description of the components of a full-fledged food safety program completing the section.

Physical conditions required in a production facility are outlined in the **Environmental Controls** section. With risk reduction in mind, it begins with the establishment location, describes criteria for facility design and construction, outlines interior facility requirements, discusses equipment design construction and installation, and concludes with a detailed discussion of the many different aspects of water safety.

Each section first describes the expected outcome. Then it outlines generally accepted standards and offers options to reach those criteria. For example, Section E4.1 notes, “Equipment should be designed, constructed and installed so that it performs its intended function; is accessible for cleaning, sanitizing, maintenance and inspection; and minimizes the potential for biological, chemical and physical contamination during operations.” To achieve this expected result, the manual goes on to give specific suggestions regarding food contact surfaces, equipment construction and equipment installation.

All processing operations must be conducted in a way that will protect the product from contamination. **Operational Controls** explains the operational conditions that encourage the production of safe food. The standards for food handler hygiene, sanitation, chemical use, equipment maintenance, pest control, water safety, shipping, receiving, storage, and recall are outlined. For example, Sections O1.1 to O1.6 describe hygiene standards including personal practices, hand washing, clothing/footwear/headwear, clothing/equipment/utensil storage, injuries and wounds, and evidence of illness.

To ensure consistent implementation of food safety practices, policies and procedures (Standard Operating Procedure [SOPs] and Sanitation Standard Operating Procedures [SSOPs]) must be developed and documented. This documentation is addressed in the **Control Programs** section. To ensure that procedures are executed properly, workers must be trained, which is discussed in the **Training Section**.

Preface

To help identify GMP compliance in a facility, the guidebook concludes with a generic **Self-Assessment** section where an operation can be evaluated against generally accepted standards/requirements. This self-assessment begins with a series of statements outlining the accepted standard for each operational and physical area of a facility. Give each area a 1 to 5 rating against that standard. At the conclusion of each section, total the points and calculate a percentage. These scores will help identify risk areas, provide direction for corrective action, and point out documentation and training needs.

Obviously, not every situation encountered by individual food processors can be addressed in this manual; nor will every procedure suggested apply to every processor. However, by using a combination of procedures outlined in this manual and judgment appropriate to the circumstance, processors can create conditions favourable for the production of safe food.

For some, implementation of GMPs may be an easy step; possibly as little as documenting the good practices already being followed. For others, considerable financial and managerial resources may be required. For example, alterations to the physical facilities may be required, sanitation practices may need to be overhauled or employee SSOP training may be necessary.

We encourage you to review the various sections in this manual. While you may not currently think in terms of the headings found in this manual, you may be surprised to discover that much of what you're already doing meets the requirements of an effective food safety program.

Once you become familiar with the environmental and operational criteria, do a self-assessment of your operation. Compare where your operation is with where it should be (a gap analysis). Pick one area (e.g., sanitation) that needs attention. Revise your procedures in that area to meet accepted GMP standards. Train or retrain your employees until they meet those new procedural standards. Monitor and record the results. Then do another self-assessment in that area to measure your progress.

Once you have one operational or environmental area up to accepted GMP standards, address the needs of another area in the same way. Should you require assistance, OMAFRA has several food safety specialists on staff. They are listed on the inside of the back cover of this guidebook. Do not hesitate to contact them.