



Taking the Pathway

Understanding
career direction in
dairy processing





Food Processing Skills Canada

FPSC is your labour, skills and workforce development non-profit organization. Our job is to provide leadership in professionalizing the food and beverage manufacturing industry so that the most important resource - people - are the best in the world. We have developed a national skills strategy which is a proven long-term approach successfully utilized by other Canadian professional sectors. This strategy builds collaborations with industry, government, academia, unions, associations, community organizations and other stakeholders.

Canada

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About Taking the Pathway

Canada's Agri-Food sector is a significant foundation of our nation's economy and was recently identified as one of Canada's top growth industries over the next 10 years. Despite this, the sector continues to face a critical labour shortage that, if left unresolved, will impede the industry's growth, employment opportunities, and overall sustainability. To address this shortage, Food Processing Skills Canada (FPSC) has embarked upon a landmark Labour Market Information Study (LMI). In its finality, the LMI will provide government and decision-makers with the research

needed to make real regulatory change that will bring both prosperity and opportunity to the sector. *Taking the Pathway: Understanding Career Direction in Dairy Processing* lays crucial groundwork for the LMI by defining occupations and career paths in the dairy processing sector. Utilizing this data, the LMI will take in-depth reviews of each career path, and their specific challenges and opportunities.

How to use the Career Pathway

This document provides practical information about the career paths available for workers in the dairy industry. In a time when attraction and recruitment of workers is important to keep up with demand, the career pathways can be helpful to educate potential workers about the opportunities and career pathways within the sector. The career ladder is a helpful tool for employers to attract, recruit and retain productive and skilled workers.



Developing the Career Pathway

To learn more about the career paths in dairy processing, we:

- ◆ Conducted extensive research to learn about the various job positions and skill levels within the dairy processing industry, including:
 - ◆ Collecting and analyzing job descriptions, job advertisements, organizational charts and other occupational information from a variety of dairy processing facilities, and
 - ◆ Conducting telephone interviews with dairy processors.

Understanding the Career Pathway

The career ladder for dairy processing illustrates the progression of occupational levels from foundational skills to executive management. The career ladder is comprised of six (6) levels. The typical entry-point into the dairy processing industry is at the Foundational Skill Level. With work experience and training (often offered on-the-job), workers often progress upward on the career ladder.



occupational levels

Foundational Skill Level (FS)

Foundational Skill Level positions are often the entry-level positions or those jobs that required no prior experience or training to work in a dairy processing facility. A high school diploma or equivalent may be preferred but is not required by most businesses. Training for foundational skill level jobs most often occurs on the job; job shadowing is important for these entry-level positions.

Applicable NOC Code(s)

NOC 9617 - Labourers in food, beverage and associated products processing

Sample Titles for Foundational Skill Level Jobs within the Dairy Processing Sector include:

- ◆ Dairy Helper
- ◆ Dairy Sampler
- ◆ Butter Packer
- ◆ Butter Wrapper
- ◆ Milk Powder Grinder
- ◆ Milk Sampler
- ◆ Ice Cream Worker

Labourers may also assist with packaging and support the work of machine operators (semi skill level workers) by feeding cartons and packaging materials into machinery, etc.

Semi Skill Level (SS)

Semi Skill Level workers typically have 6 months – 1 year of experience working in dairy processing facilities. A high school diploma is often preferred but may not be a requirement. Workers in this job class typically receive training on the job and also receive WHMIS, food safety and food safety management system training, like HACCP. Workers who start in Foundational Skill Level Positions often progress into Semi Skill Level positions as they gain additional experience and training.

Applicable NOC Code(s)

NOC 9461 – Process control and machine operators, food, beverage and associated products processing

Sample Titles for Semi Skill Level Jobs within the Dairy Processing Sector include:

- ◆ Dairy Plant Machine Operator
- ◆ Homogenizer Operator
- ◆ Yogurt Maker
- ◆ *Milk Pasteurizer
- ◆ Milk Dryer
- ◆ Powdered Milk Dryer
- ◆ Milk Processing Equipment Operator
- ◆ Canned Milk Sterilizer
- ◆ Ice Cream Maker
- ◆ Ice Cream Novelty Maker
- ◆ Ice Cream Decorator
- ◆ Frozen Stick Novelty Maker

*Pasteurizer Operators, Raw Milk Receivers, and CIP Operators are often the highest level of Semi Skill Level (SS) workers. Pasteurizers and Raw Milk Receivers use a higher level of Document Use, Oral Communication, Numeracy and Thinking Skills to perform their jobs. Only the most skilled machine operators are moved into these positions.

High Skill Level (HS)

High Skill Level Workers typically have at least 1 year of experience (typically 1-3 years) in dairy processing and are able to perform the range of tasks that are completed on the production/ processing line. A high school diploma is considered an asset. Additional training related to supervising workers may be provided in-house. Workers receive WHMIS, food safety and food safety management system training. Workers in Semi Skill Level positions often advance to high Skill Level positions as they gain additional experience and training.

Applicable NOC Code(s)

NOC 9213 – Supervisors, Food and Beverage Processing

Sample Titles for High Skill Level Jobs within the Dairy Processing Sector include:

- ◆ Milk Processing Foreperson/Lead Hand
- ◆ Milk Processing Plant Foreperson/Lead Hand
- ◆ Milk Production Foreperson/Lead Hand
- ◆ Dairy Products Processing Foreperson/Lead Hand
- ◆ Ice Cream Making Foreperson/Lead Hand

Supervisory Skill Level (S)

Supervisory Skill Level workers typically have 2-3 years of experience on the line of a dairy processing facility. Additional training in production management, supervising and employee management may be required and provided by the company. A high school diploma or equivalent is often required; additional post-secondary education is an asset. It is typical for supervisors to begin at the Foundational Skill Level, and through experience and additional training, move up into supervisory roles. Supervisors must complete WHMIS, food safety and food safety management system training.

Applicable NOC Code(s)

NOC 9213 – Supervisors, Food and Beverage and Associated Products Processing

Sample Titles for Supervisory Skill Level Jobs within the Dairy Processing Sector include:

- ◆ Dairy Processing Supervisor
- ◆ Production Supervisor

Management Skill Level (M)

Management Skill Level workers typically have a minimum of 5 years of supervisory experience within the dairy processing industry. Leadership experience is considered an asset. A postsecondary education may be required or considered a strong asset. Additional training in management is often required of job incumbents. Managers require WHMIS, food safety and food safety management system training.

Applicable NOC Code(s)

NOC 0911 – Manufacturing Manager

Sample Titles for Management Skill Level Jobs within the Dairy Processing Sector include:

- ◆ Dairy Plant Manager
- ◆ Production Manager

Senior Executive Leadership Skill Level (SE)

Senior Executive Leadership Skill Level workers typically have extensive experience (e.g. 7-10+) years within the dairy processing industry, or within other food and beverage processing facilities. They are responsible for managing corporate affairs and lead the strategic direction and vision of the overall organization. Skills in organizational management and business administration are critical.

Applicable NOC Code(s)

NOC 0016 – Senior Manager – construction, transportation, production, and utilities

NOC 0911 – Manufacturing Manager

Sample Titles for Senior Executive Leadership Skill Level Jobs within the Dairy Processing Sector include:

- ◆ Director of Operations/
Production
- ◆ VP of Operations/
Production



SE	SENIOR EXECUTIVE LEADERSHIP
M	MANAGEMENT
S	SUPERVISORY
HS	HIGH SKILL
I	INTERMEDIATE
F	FOUNDATIONAL

dairy

PROCESSING POSITIONS CAREER LADDER

TITLE	EXPERIENCE / EDUCATION
<p>SE</p> <p>SENIOR EXECUTIVE LEADERSHIP</p> <ul style="list-style-type: none"> ◆ Director of operations/production 	<ul style="list-style-type: none"> ◆ 7-10 years of experience in the dairy processing industry is the most significant requirement
<p>M</p> <p>MANAGEMENT</p> <ul style="list-style-type: none"> ◆ Dairy plant manager ◆ Production manager 	<ul style="list-style-type: none"> ◆ Minimum of 5 years of experience in dairy processing industry ◆ Degree or diploma in food science may be considered an asset ◆ Leadership experience
<p>S</p> <p>SUPERVISORY</p> <ul style="list-style-type: none"> ◆ Dairy Processing Supervisor 	<ul style="list-style-type: none"> ◆ 3-5 years of experience in dairy processing industry ◆ High school diploma
<p>HS</p> <p>HIGH-SKILLED</p> <ul style="list-style-type: none"> ◆ Dairy processing foreperson/lead hand ◆ Milk processing plant foreperson/lead hand ◆ Milk production foreperson/lead hand ◆ Dairy products processing foreperson/lead hand ◆ Ice cream making foreperson/lead hand 	<ul style="list-style-type: none"> ◆ Minimum 1 year of experience as dairy processing worker ◆ High school diploma may be required
<p>I</p> <p>INTERMEDIATE</p> <ul style="list-style-type: none"> ◆ Dairy processing plant workers and machine operators <p><i>Various titles given for specific duties performed on the line or throughout the process of handling and packaging</i></p>	<ul style="list-style-type: none"> ◆ Experience as a labourer may be required ◆ Some High School education may be considered an asset
<p>F</p> <p>FOUNDATIONAL</p> <ul style="list-style-type: none"> ◆ Dairy Plant Labourers <p><i>Various titles given for specific duties performed on the line or throughout the process of handling and packaging</i></p>	<ul style="list-style-type: none"> ◆ No experience required ◆ Some high school education may be considered an asset

dairy processing career progression

SUPERVISORY / MANAGEMENT



EXECUTIVE LEADERSHIP SKILL LEVEL

10+ years of management experience food processing sector, ability to plan strategically, create vision for organization
Titles include: Director of Operations, VP



MANAGEMENT SKILL LEVEL

Years of experience in the dairy processing industry and on the line, ability to manage people, processes and budgets
Titles include: Dairy Processing Manager



SUPERVISORY SKILL LEVEL

3-5 years of experience in the dairy processing industry and on the line, ability to manage people
Titles include: Dairy Processing Supervisor



FRONTLINE DAIRY PROCESSING



HIGH SKILL LEVEL

Minimum of 1 year of experience in the dairy processing industry and on the line
Titles include: Dairy Processing Lead Hand



INTERMEDIATE SKILL LEVEL

Experience as dairy processing plant labourer may be required
Titles include: Dairy Plant Workers; can be many job titles, which are determined by the division of tasks and products within a facility



FOUNDATIONAL SKILL LEVEL

No experience, have language skills
Titles include: Dairy Plant Labourer; can be various job titles given for specific duties performed on a line of throughout process of receiving through to packaging and storage



MAY MOVE FROM HERE TO QA/QC

key findings

Our research helped to identify key issues and challenges that are unique to the dairy processing sector:

Automation

The level of automation within a dairy processing facility has a direct impact on the skill level and cross-training of dairy processing operators. Research indicates that machinery and equipment used for various steps of dairy processing often require the same skills for operation, including: programming and equipment interface; reading settings and output data; monitoring machine operation; and troubleshooting minor issues. In plants where automated equipment is used for most steps and processes, operators may be moved from station to station depending on need and production targets.

Operations that are more manual (less automated equipment) typically train employees to work at specific processing points or with specific products. Manual operations are also often smaller operations; therefore, it is not uncommon for workers in small plants to specialize in a certain area, product or process.

From Helper to Operator

New employees, with limited or no experience in dairy processing, are typically assigned to helper or labourer positions, providing support and assistance to dairy processing operators or working on the packaging line. New employees are often assigned to product packaging and/or mastering positions, and then are introduced to various aspects of processing under the guidance of experienced operators. Helpers/labourers can expect to move into Operator positions once they have received on-the-job training and are most-often partnered with an experienced operator before performing the job independently.

Milk Pasteurizer and Raw Milk Receiver – Higher Skilled Operators

While Milk Pasteurizer and Raw Milk Receiver are classified under the NOC Code 9461, research indicates that the Pasteurizer Operator, Raw Milk Receiver and CIP Operator are more high-skilled Operator positions that require additional experience and expertise to perform. Subject Matter Experts indicated that the best Operators are selected for these higher skilled operations positions. Pasteurizer Operators, CIP Operators and Raw Milk Receivers require acute document use and numeracy skills; are required to communicate and



collaborate with on-site inspectors; require enhanced thinking skills and perform more high-risk, critical operations in relation to HACCP and food safety.

Migration from Processing to Quality Control

Vertical movement up the Processing Career Ladder is common – starting from entry-level labourer positions to processing lead hands and supervisors. Lateral movement, from the warehouse and logistics department (entry-level positions) into Labourer, and in some cases Machine Operator, positions is also common.

Skilled Processing Leadhands may qualify for production quality control positions. The QC positions, while still considered processing/production positions, involve completing quality control processes – such as testing and inspection – on the production floor. These individuals often still report to the production supervisor, but also communicate and collaborate with the Quality Assurance/Quality Control department.

appendix a

DAIRY PROCESSING

LEVEL/NOC	SAMPLE TITLES	DESCRIPTION/DUTIES	EXPERIENCE/ EDUCATION
Executive Leadership Skill Level NOC 0911 - Manufacturing Manager	<ul style="list-style-type: none">◆ Director of Operations	<ul style="list-style-type: none">◆ Strategic planning/contributing to strategic planning for the organization◆ Identify opportunities to eliminate waste, add value, maximize yield and develop solutions by initiating team-based studies and trials related to process improvement◆ Develop and implement continuous improvement strategies in the organization◆ Set and monitor budgets◆ Oversee quality control, inventory management, and finished product warehousing and transfers◆ Lead, motivate and coach all employees to drive performance◆ Identify and implement capital projects/physical facility improvements such as technology upgrades◆ Track and ensure that regulation changes are implemented throughout the organization	<ul style="list-style-type: none">◆ 7-10 years of experience in the dairy processing industry◆ Leadership experience

Management Skill Level

NOC 9211 –
Manufacturing
Manager

- | | | |
|---|---|---|
| <ul style="list-style-type: none"> ◆ Dairy Plant Manager | <ul style="list-style-type: none"> ◆ Provide leadership and direction to the plant ◆ Plan, organize, direct, control and evaluate the operations of the dairy processing plant ◆ Direct quality control inspection system and develop production reporting procedures ◆ Plan and manage production budget ◆ Collect and report plant data related to production and performance ◆ Ensure customer satisfaction by verifying production targets and shipping schedules are met ◆ Develop production schedules and maintain inventory of raw materials and finished products ◆ Ensure all SOPs are developed, used and maintained ◆ Develop and implement plans to efficiently use materials, labour and equipment to meet production targets ◆ Ensure compliance with all regulatory requirements and guidelines ◆ Assist in addressing and resolving customer complaints related to product quality ◆ Lead and manage employees ◆ Collaborate with other organization department to meet corporate goals | <ul style="list-style-type: none"> ◆ 5+ years of experience in dairy processing ◆ Leadership experience ◆ Post-secondary degree diploma is asset |
|---|---|---|

appendix a

DAIRY PROCESSING

<p>Supervisory Skill Level</p> <p>NOC 9213 – Supervisors, food, beverage and associated products processing</p>	<ul style="list-style-type: none"> ◆ Dairy Processing Supervisor 	<ul style="list-style-type: none"> ◆ Supervise, co-ordinate and schedule the activities of workers who process, package, test and grade dairy products ◆ Establish methods to meet work schedules and co-ordinate work activities with other departments ◆ Resolve work problems and recommend measures to improve productivity and product quality ◆ Requisition materials and supplies ◆ Train staff in job duties, safety procedures and company policy ◆ Recommend personnel actions such as hirings and promotions ◆ Prepare production and other reports 	<ul style="list-style-type: none"> ◆ 3-5 years of experience in the dairy processing industry ◆ High School Diploma is an asset
<p>High Skill Level</p> <p>NOC 9213 – Supervisors, food, beverage and associated products processing</p>	<p>Sample Titles:</p> <ul style="list-style-type: none"> ◆ Milk Processing Foreperson ◆ Milk Processing ◆ Plant Foreperson ◆ Milk Production Foreperson ◆ Dairy Products Processing Foreperson 	<ul style="list-style-type: none"> ◆ Provide direct supervision on the line to dairy processing plant workers/machine operators and labourers ◆ Provide guidance and direction to dairy processing plant workers/machine operators and labourers ◆ Ensure safety and efficiency of dairy processing plant workers/machine operators and labourer 	<ul style="list-style-type: none"> ◆ Minimum of 1 year of experience in dairy processing ◆ High School Diploma is an asset

Intermediate Skill Level

NOC 9461 – Process control and machine operators, food, beverage and associated products processing

Dairy Processing Plant Workers and Machine Operators

- ◆ Sample Titles:
 - ◆ Dairy Plant Machine Operator
 - ◆ Homogenizer Operator
 - ◆ Pasteurizer Operator
 - ◆ Yogurt Maker
 - ◆ Milk Pasteurizer
 - ◆ Milk Dryer
 - ◆ Powdered Milk Dryer
 - ◆ Milk Processing Equipment Operator
 - ◆ Canned Milk Sterilizer
 - ◆ Butter Maker
 - ◆ Ice Cream Maker
 - ◆ Ice Cream Novelty Maker
 - ◆ Ice Cream Decorator
 - ◆ Frozen Stick Novelty Maker
- ◆ Operate multi-function process control machinery through control panels, computer terminals or other control systems
- ◆ Observe gauges, computer printouts and video monitors to verify specified processing conditions and make adjustments to process variables such as cooking times, ingredient inputs, flow rates and temperature settings
- ◆ Maintain shift log of production and other data

- ◆ Experience as a Dairy Processing Labourer may be required
- ◆ Some High School may be required

appendix a

DAIRY PROCESSING

Foundational Skill Level

NOC 9617 –
Labourers in food,
beverage and
associated products
processing

Dairy Processing Labourer

Sample Titles:

- ◆ Dairy Helper
- ◆ Dairy Sampler
- ◆ Butter Packer
- ◆ Butter Wrapper
- ◆ Milk Powder Grinder
- ◆ Milk Sampler
- ◆ Ice Cream Worker

- ◆ Transport raw materials, finished products and packaging materials throughout plant and warehouse manually, or with powered equipment
- ◆ Measure and dump ingredients into hoppers of mixing and grinding machines or mobile tank trucks
- ◆ Feed and unload food, beverage and associated products processing machines
- ◆ Feed flattened boxes into forming machines to construct containers
- ◆ Remove filled containers from conveyors and manually pack goods into bags, boxes or other containers
- ◆ Clean work areas and equipment
- ◆ Check products and packaging for basic quality defects
- ◆ Assist process control and machine operators in performing their duties.

- ◆ No experience required
- ◆ Some High School may be considered an asset

notes

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