How to write a program

Guidance for slaughter and meat processing operations

Alberta

How to write a program | Agriculture, Forestry and Rural Economic Development

Contents

1.0 Introduction

Written control programs, also commonly known as work instructions, are important in the production of safe food and the proper handling of animals. There are many positive results of well-developed and implemented written programs, including:

- Providing guidance to workers, including use as training tools
- Providing the basis for consistency among workers to carry out procedures
- Providing a baseline for inspectors to measure compliance
- Generating records that provide evidence that a task was completed

Perhaps the most important outcome of written programs is that they provide the operator with the confidence that tasks and activities occur as expected within their operation. When workers receive training on the same written programs and those documents are used as reference, the operator can be assured that their workers are doing the right thing and meeting expectations.

This guidebook outlines the components necessary for a thorough written program required in Alberta's *Meat Inspection Act (MIA)*, Meat Inspection Regulation (MIR), and Meat Facility Standards (MFS) and provides an example of a written program and a supporting record.

2.0 Regulatory requirements for written programs

Objective: The Meat Facility Standards (MFS) is a policy document legislated by the *Meat Inspection Regulation*, (MIR) Alberta Regulation 42/2003, Section 15.1. This standard describes the conditions under which meat is slaughtered, processed, stored, and transported to ensure food safety.

Regulatory Reference: Meat Facility Standards

Section 2.3: Where the word "program" is used, it refers to a written program and must include:

a) **Purpose** of the activity or procedure;
b) **Who** conducts the activity or procedure;
c) **What** they must do, that is, how the activity or procedure is performed including instructions and how the risks are controlled;
d) **When** (i.e., frequency) the activity or procedure is conducted;
e) **Deviation** procedures;
f) **Verification** procedures; and
g) Any associated **records.**

Guidelines: Written programs explain how the procedures are conducted and the associated records demonstrate that the procedures were carried out, including the result of the procedure.

Implementation of a written program includes training applicable workers on the procedure and periodically checking that they are followed as written. The development and use of written programs beyond those required in the MFS is encouraged and is at the discretion of the operator. For all written programs, it is important that they be written to accurately reflect the activities as they occur in the facility.

The MFS Section 3 - Manufacturing Controls specifies the need to develop and maintain programs for food processing activities. The standard states that a hazard review must be done for each process to identify potential hazards. Measures to control the hazards can be written out in the program format described in this guidebook for each hazard, if the assessment determines it to be of significant risk. For information on how to conduct a hazard assessment, refer to the document *Writing a Hazard Control Plan for Meat Facilities*.

3.0 Components of a written program

Objective: Procedures should be written in clear format with familiar headings for workers to easily find the information they are looking for. Use of a standard template supports this approach and results in a document that workers can quickly check if they have not performed a task for a while or if a brief refresher is needed. Remember to use simple language and to provide enough detail for the reader to follow the directions, but not too much information that it becomes cumbersome and dilutes the intent of the procedure.

By including each component in your written program, you will ensure that the documents are complete and achieve the following goals:

- Demonstrates due diligence
- Meets regulatory requirements
- Establishes a paper trail for reviewing the history of an activity

Guideline: The template provided in Appendix 3 may be used for most written procedures. Use of this template ensures that all components of the written program are addressed and when the same format is used regularly, the information is easily searchable.

For existing procedures that are not yet documented, begin by writing out the process as it is currently conducted in the facility. For new tasks, begin by writing out the plan for the new procedure as it can be modified as necessary before it becomes final. If gaps are present in the procedure, they will be quickly noticeable once they are written down.

When complete, these written programs become the basis of a strong worker-training program. By training workers on a common procedure, they are more likely to conduct the procedure correctly and consistently.

These documents are not set in stone and they can be updated as often as necessary to ensure that they correspond with the operations in the facility.

3.1 Purpose of the activity or procedure

Provide a brief description of what the procedure is for and what it accomplishes when it is used. This gives the reader the scope of the procedure with some perspective so that they understand why it is important and how it fits into the context of their individual work and the overall operations of the facility. For example, reaching a target internal product temperature controls the growth of pathogenic bacteria during a cooking procedure.

3.2 Who conducts the activity or procedure

Specify which job role in your organization is responsible for conducting the activity. For example, the kill floor supervisor or the receiver. In smaller facilities where people tend to wear more than one operational hat, it might be more sensible to use an individual's name. Avoid using terms such as "trained employee" or "designated employee" as this does not clearly designate the duty to someone and increases the risk of no one actually performing the function.

3.3 What they must do, that is, how the activity or procedure is performed including instructions and how the risks are controlled

The instructions can be organized in a variety or combination of formats including checklists, flowcharts, and step-by-step procedures.

> *Check lists* are a straightforward approach to writing a procedure and are useful when the order that things are done is not important, but they must all be completed. For example, when performing a pre-operational inspection, the order that the areas are inspected might not be essential and a checklist of all the various things that are being assessed (i.e., slaughter equipment, conveyor belts, etc.) ensures that no areas are missed on the inspection.
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> *Flowcharts* can be used to simplify a complex situation when several things are occurring at the same time. It gives a good overview of the procedure and are supplemented with steps where necessary. For example, identifying hazards of improper storage can be quickly understood by including a flowchart or schematic to pinpoint cross contamination.
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> *Step-by-step* procedures are the most common format and are useful for sequential procedures, or when one step must precede another. The steps are usually numbered so that they are followed in the proper order. For example, calibration checks of equipment typically involves a specific order of doing things and this type of procedure is best written in a step format.

Perhaps the most challenging part of developing this section is to provide enough information for the worker to be able to conduct the activity, yet not too much so that the procedure is overwhelming and it goes unread. Be sure to engage the person who commonly performs the procedure when updating it or writing it for the first time. They can provide valuable information on what works and what does not work.

3.4 When (i.e., frequency) the activity or procedure is conducted

The frequency of an activity documented in the procedure is a commitment to the minimum number of times that it will be done in a given time period. The frequency should be such that if something out of the ordinary occurs, it is recognized, the process is brought back under control, and affected product is sufficiently identified without the risk of unsafe product entering the general inventory.

Sometimes it is important to identify what time of the day the procedure is carried out so that control is best assured. For example, if a procedure states that the temperature of a cooler is checked once per day, the time of day that it is checked is important to determining if the product was safely stored overnight. In this case, the frequency would be best stated as “Every production morning at startup” or something similar that ensures temperature checks will catch a faulty temperature but not one that results from routine operation fluctuations such as the door remaining open for a period during loading/unloading, or fluctuations in temperature of a freezer during defrost cycles.

Monitoring activities can occur more often than stated in the procedure. Referring to the example above, the storage temperature can be, and often is, checked more than once per day, however, the procedure required that the temperature check is conducted and the results recorded once per day at a specific time, otherwise an inspector could find a nonconformance to the procedure.

Rarely are “as necessary,” “when required” or similar terms acceptable because they do not provide the worker with sufficient information to conduct the activity. Be precise so that the expectation is clear.

3.5 Deviation procedures

A deviation is a failure to maintain control over a potential hazard and is indicated when an unusual or unacceptable result is observed during a monitoring procedure. Since a deviation is always a possibility, anticipating what to do if a process fails and how to get it back under control is worth planning. It is important to document the events whenever something out of the ordinary occurs. Although it might not seem important at the time, this information could be valuable later on and having it documented could be meaningful in identifying a root cause or preventing it from happening again.

It is impossible to forecast all the potential deviations that could occur; however, providing workers with guidance on who to contact, how to handle potentially unsafe product, and where to document the occurrence is a good start in regaining control over the safety of the product. At a minimum the deviation procedure should include:

- Instructions on how to stop the line/equipment that could harm worker(s) or allow the unsafe process to continue
- Who to notify that a problem has occurred and if the worker needs assistance
- How to isolate the affected product so that it cannot mistakenly be distributed without further approval
- Where to document the details of a deviation event

Deviations and the actions taken to correct the situation must be immediate and they must address both the process and the product. There may be are short term solutions that result in a simple tweak to the process or at other times the solution will result in significant changes and an update to the program.

When the same simple tweak is repeated on a regular basis, then a deeper dive into finding and eliminating the root cause for the deviation is necessary. Sometimes this can be a complex investigation, it can take time, and any temporary procedures conducted in the meantime should be clearly documented.

3.6 Verification procedures

A verification procedure ensures that the written instructions match what is being done and that all staff are conducting the activity the same way. In other words, verification ensures that procedures are being conducted the right way, every time, and in a consistent manner from employee to employee, and from shift to shift.

Generally verification procedures have two components; 1) observation of the staff member conducting the monitoring procedures, and 2) a check of the records that have been completed since the last verification check was completed.

The on-site check should be done at a frequency relative to the hazards associated with the step being verified. For example, Manufacturing Control procedures (e.g., cooking) are verified more often than other procedures in other programs (e.g., Sanitation Program). Over time, adjust the frequency of verification in response to the identification of problems with monitoring or corrective actions. Perform the on-site with different shifts and different employees if more than one person is involved in monitoring the task. This ensures that instructions are carried out in a consistent manner across shifts.

The record check ensures records are filled out accurately, completely, and in a timely manner. It also checks that deviations have been addressed with corrective actions and that they are recorded and signed off.

Verification procedures are conducted by someone other than the monitor, who knows the task very well, such as a supervisor. A record of the verification is maintained, usually on the monitoring record, with a signature of the verifier and that date of the verification activity took place.

If a monitor strays from the written instructions, it is important to determine why. Sometimes there is a good reason and it can result in modifications to the procedure for everyone. Other times it identifies where an individual must be re-trained to follow the original procedure.

3.7 Any associated records

A record is simply a blank form where information has been documented. The form can be a template prepared in advance for the purpose of documenting observations and information, it can be a blank piece of paper where pertinent information is recorded or it can be in the form of someone's notebook or daily log journal. The format is not important, however, the ability to track down the information at a later time is very important. Therefore, when you decide how to document the results of a procedure, it is equally important to consider the ease of documenting and the ease of retrieving the information.

The most effective way to capture all of the information and to keep it all together for future reference is to create a blank template that is completed when the procedure is carried out. This ensures that the record of information is thorough.

When creating a blank template, provide a space for each piece of information that will help you to analyze the data, such as when determining the cause of a problem or in the event of a recall. Information that should be included on a form includes but is not limited to:

- The date the information was collected
- The name of the worker doing the monitoring
- The observation itself, including the correct units if applicable (i.e., degrees Celsius, millimeters, etc.) or the result (i.e., positive, negative, present, absent, etc.)
- Space to record any deviations or corrective actions
- A summary of critical limits or other information that provides a quick reference for process parameters, that is, the point at which a corrective action is required

A best practice is to fill every "blank" on the form either with the relevant information or with "N/A" if the space is not applicable. This ensures that the record is complete and nothing was overlooked.

Remember, the records provide valuable information and are essential for continuous improvement in your operation. They serve many important functions, such as:

- Providing an accurate history of how the food was processed
- Providing evidence that everything was working properly on any particular day
- Providing details of actions taken that are not a part of the regular procedure
- Providing the basis for analyzing data and identifying trends in your process
- Providing information on gaps in your process that may suggest the need for worker training

3.7.1 Document control

Document control is not a regulatory requirement, but it is a best practice that helps to identify if the proper version of a procedure or form is in use. The means of identifying a version can be as simple as changing the number every time a change is made. For example, the original document is numbered *Version #1.0* and appears in the footer or the title of the document. Each time an update is made to the document, the number is changed to *Version #1.1, Version #1.2*, and so on.

Remember to also have a person of authority at the facility approve the procedure when changes are made. They should sign and date the copy when approved, indicating that it is ready for implementation from that date forward.

3.7.2 Document review

The procedures should be reviewed when there are changes to the process at the facility or new equipment is installed, to ensure that the purpose of the program continues to be met. If you determine that a procedure requires updates, re-issue the new version to all workers and train them on the changes.

A good practice is to review each program annually for accuracy and effectiveness.

3.7.3 Record integrity

The records are maintained for at least two years, as this is the approximate maximum length of time that your product would be stored in a consumer's freezer. If the food were consumed at that time and the customer contacts you with a complaint, you would still have the documentation available to do a paperwork investigation into the nature of the complaint.

The records can be electronic or hard copies, hand written or computer generated, stored on-site or off-site – it really does not matter, as long as you are able to find them when you need them and they can be made available in a timely manner.

4.0 Tips for writing and maintaining programs

Once a procedure has been developed, it is important to train workers who will be carrying out the procedure on it, because it provides them with the information they need to properly and consistently do their job. Additionally, training workers on a procedure reduces miscommunication and differences in how a job is completed.

Tips for writing a procedure and keeping it up-to-date:

- Interview the person who regularly does the task and include their input in the procedure
- Use short and clear statements (e.g., bullet points)
- Use diagrams, pictures, or flowcharts where possible
- Test the procedure to be sure that it covers all the material and no steps are missing
- Have the procedure reviewed by those doing the job

5.0 A note on keeping records

Remember that the most important role that records play is in proving a history that tells the story of how a process has been running. They provide a platform for trends to be spotted that could suggest where efficiencies may be gained or they can provide a subtle or a stark warning that a food safety incident is developing. Therefore, a review of the records on a periodic basis is important not only to ensure that the operations are occurring as intended, but also to support a healthy business by identifying trends that may not be obvious from one day to the next.

Keeping food safety records is important because records can demonstrate proof that food safety hazards are under control, as well as satisfying regulatory or customer requirements.

Food safety records can show that workers are carrying out food safety related tasks and controls. For example, monitoring and recording cooking and cooling temperatures for cooked foods. Records can also be used to resolve issues or to track trends in your business.

Here are some important points for keeping records, they:

- Can be paper-based or electronic
- Must be signed and properly dated (year/month/day)
- Must be legible – use ink that does not smear
- Must be credible/accurate, no falsification
- Must be properly stored
- Must be routinely reviewed for completion
- Must be available for review by regulatory authorities if/when required

Additionally, it is important to train your workers in record keeping so that they can understand why food safety records are important as well as understanding their role in record keeping. When your workers understand their role in food safety, it empowers them to take responsibility and take pride in what they are doing. Record keeping becomes a part of your business and helps to create a healthy culture of food safety amongst your workers.

Appendix 1: Example of a written program

Title: Cooked Product Temperature Check Procedure

Purpose: To ensure that the minimum internal temperature is achieved for all cooked Ready-to-Eat products in order to control the risk.

Identified risk: Biological hazards from raw beef.

Identified Critical Limit: Internal product temperature is equal to or greater than 72°C/162ºF.

Who: Smokehouse operator

What:

1. Obtain the Cooked Product Temperature Record.
2. Record the date, product description, batch lot code and batch weight.
3. Place products in smokehouse.
4. Set smokehouse to required temperature.
5. Once the cook cycle is finished, take the internal temperature of largest product. (If the products are the same size, take the temperature of a product located in the coldest location in the smokehouse) and record on the Cooked Product Temperature Record
6. If the critical limit is met (internal product temperature is 72ºC/162ºF or above), remove product from smokehouse.
7. If temperature is below 72ºC/162ºF, see Deviation and Corrective Actions section.
8. Initial the record.

When/frequency: Every batch of product, at the end of each cook cycle.

Deviation procedures:

If the product has not reached an internal temperature of 72ºC/162ºF record the actual reading temperature on the record. Place the product back in the smokehouse and continue cooking longer. Repeat this procedure until the critical limit is met. Record the final temperature.

The Smokehouse Operator will not allow products to exit the smokehouse until correct temperature is reached.

If the temperature is not met after two cycles, check that the thermometer is accurate in the high temperature range.

If the temperature is still not achieved, contact the production supervisor for further direction.

Document all deviations and corrective actions on the Cooked Product Temperature Record.

Verification procedures:

On-site verification: Once per week the Kitchen Supervisor conducts a check of the Cooked Product Temperature Check monitor. The Kitchen Supervisor observes the monitor perform the tasks outlined above to determine if they are conducted as written, and knows what to do if a problem occurs. The Kitchen Supervisor signs and dates the Cooked Product Temperature Record corresponding to the date that the verification activity occurred.

Paperwork verification: Once per month the Kitchen Supervisor checks the Cooked Product Temperature Records to ensure they are complete and that all deviations and corrective actions have been addressed.

Record: Cooked Product Temperature Record

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Appendix 2: Example of a completed record

Cooked Product Temperature Record

Internal product temperature must be equal to or greater than 72°C/162°F.

Date	Product description	Batch/Lot code	Batch weight	Internal product temperature (°C)	Time of temperature check	Deviation procedures and comments	Monitor's initials
2022 02 22	RTE pepperoni sticks	22-02-22-A	27 kg	64	10:28 AM	Product placed back in smokehouse for 2nd cycle	KM
2022 02 22	RTE pepperoni sticks	22-02-22-A	27 kg	64	11:35 AM	Thermometer accuracy checked. Reading 10°C low at boiling temperature. Calibration adjusted and product temperature taken again	KM
2022 02 22	RTE pepperoni sticks	22-02-22-A	27 kg	73	11:45 AM	Product removed from smokehouse	KM
2022 02 22	RTE smokies	22-02-22-B	34 kg	73	1:45 PM	N/A	KM
2022 02 22	RTE smokies	22-02-22-C	34 kg	72	2:47 PM	N/A	KM

On-site Verification: (Name/Signature/Date)

Paperwork Verification: (Name/Signature/Date)

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Appendix 3: Written program blank template

Title of the Procedure: Use a name that clearly identifies the task.

Purpose: What is the purpose of the procedure or what is it being used for?

Identified Risks: Include for Manufacturing Control Program, and if desired, include in all other programs

Critical Limit or Criteria: Include for Manufacturing Control Program, and if desired, include in all other programs

Who: Who conducts the activity?

What: What are the specific instructions/procedures to follow?

When: When must the activities in the procedure occur and how often (frequency)?

Deviation: Indicates what to do if a result is out of the ordinary or does not meet specification. Include how to regain control of the process or shut it down, what to do with suspect product and who needs to be contacted.

Verification: Identify who checks that the procedures and paperwork are completed properly and provide a brief description on how this is done. Include the frequencies that on-site and paperwork verifications are conducted. Include instruction that the Verifier is to sign and date the work that was verified.

Records: List all records where information pertaining to the procedure is documented and maintained. Include a version number and update it when changes are made.

Signature/date: Include the date and signature of the person who approved the procedure for implementation. Updated versions of a procedure are also signed and dated by the person who approves them.