



New Normal Standard Operating Procedures For Businesses: AGRICULTURE

04 September 2020

BCCET • Prospero

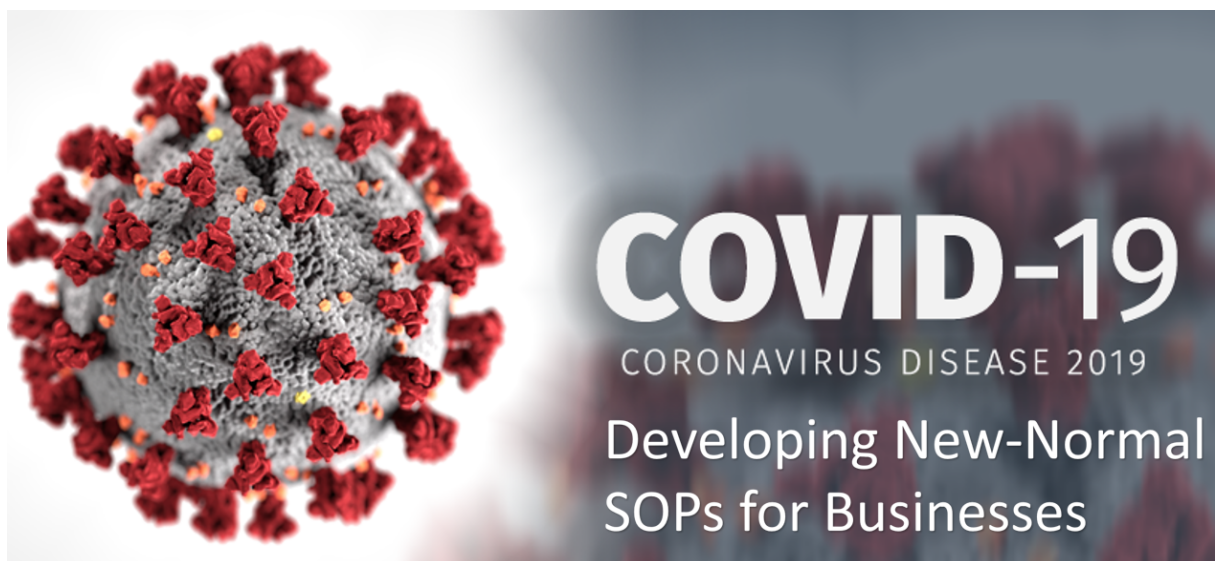


Ownership

These standard operating procedures (SOPs) belong to the businesses of Zambia. Together, business experts designed a set of SOPs that, when implemented, have the highest potential of ensuring that businesses that are currently open remain open; and those that are closed re-open in a responsible manner, despite the COVID-19 pandemic.

Acknowledgements

Special thanks are extended to the Business Coalition Council Emergency Taskforce (BCCET), UK Aid and Prospero Zambia for making this initiative possible. To the champions of industry in Zambia that made their COVID-19-adapted SOPs available for case studies and the extraction of best practices, we say a sincere THANK YOU!



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Message from the Business Coalition Council Emergency Taskforce (BCCET)

We are all aware of the devastating effects that COVID-19 has had on the Zambian economy. During this trying time, the business community, through BCCET, has strived to find solutions to keep our economy going; preserve jobs and enable a safe working environment. As part of this, we have identified the need for sector-based Standard Operating Procedures (SOPs) to mitigate the fear of doing business and, hence, bring a standardised multi-sector approach to the 'new normal.' As such, we have, in partnership with DFID and Prospero, developed the attached SOP Guidelines for use by the private sector and for onward transmission by the Government of Zambia.


It is our hope that BCCET will continue to supplement Government's efforts to make sure that economic activity continues. This document addresses this issue and also empowers the private sector to take responsibility for implementing these SOPs across multiple industry sectors. This undertaking demonstrates a proactive private sector approach in finding solutions that support Zambia's economic recovery.

Professor Oliver Saasa
Chairman

Ashu Sagar
Vice Chairman Economics

Sam Abrahams
Vice Chairman Medical

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Safety is on
everyone –
We are only
as safe as the
least safe
member of
society.

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INTRODUCTION – New-Normal SOP's – A Business Adaptation to COVID-19

To support the responsible opening up of the Zambian economy during the COVID-19 pandemic, the BCCET and Prospero identified the urgent need to develop a set of standard operating procedures (SOPs). These SOPs were developed to assist employers to prepare their respective workplaces for workers to return and business operations to continue. Many industries/businesses do not have clear guidance on mandatory and recommended best practices for operation under current conditions, so these SOPs will advise industry sectors on how to work safely during the COVID-19 pandemic. The SOPs offer a framework for respective workplaces to protect workers, their families, business clients/customers and the wider community while also protecting livelihoods, jobs and employee productivity.

These SOPs are timely and are urgently required to enable an economically sustainable, proactive and collective approach to opening up the Zambian economy under medical and industry expert guidance.

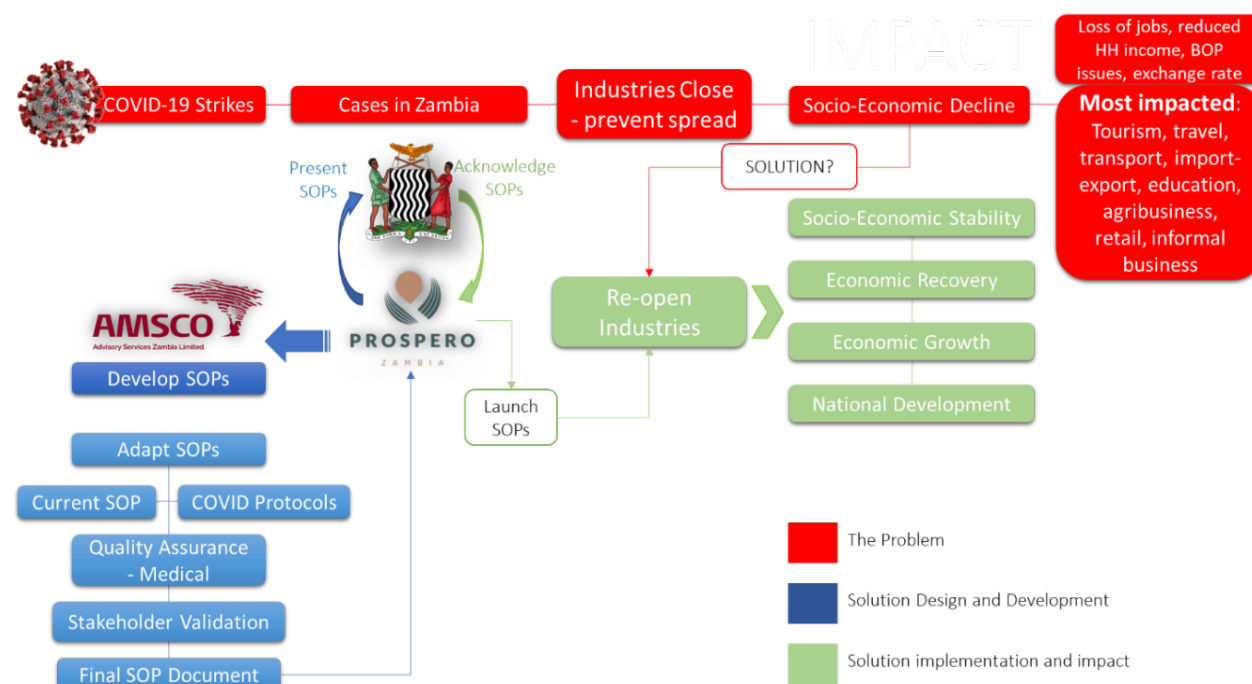
This SOP compendium primarily focuses on overall sector and sub-sector considerations and does not seek to provide specific guidance on occupational health and safety (OHS) measures on a site-specific basis.

Situational Analysis – How the COVID-19 Pandemic is Affecting Business and Economic Development

As a result of the increase in reported cases of COVID-19, the Government of Zambia moved to introduce Statutory Instruments 21 and 22 of 2020, which empowered various government ministries and agencies to, among other things, close selected sections of the Zambian economy. The abrupt interruption to normal business operations obviously had a substantial impact in terms of economic disruption, as has been the case across the world, resulting in a loss in revenue for numerous businesses. According to the following sources, COVID-19 has impacted Zambia both on social and economic aspects:

Accommodation and food (tourism)	CUTS (2020)	Drop in room occupancy due to social distancing guidelines Anticipated job losses (if cases continue to rise) = 14,297 Anticipated job losses (as a result of full lockdown) = 19,063
	ICA (2020)	At least 700 jobs lost between February and May 2020 (from a sample of 416 companies)
Agriculture	CUTS (2020)	Reduction in labour supply, productivity and exports Anticipated job losses (if cases continue to rise) = 4,683
	ICA (2020)	At least 600 jobs lost between February and May 2020 (from a sample of 416 companies)
Construction	CUTS (2020)	Major projects such as road construction may decline as public funds are diverted towards health and social cash transfer programmes
Manufacturing	CUTS (2020)	Reductions in input imports as well as reduced demand due to reduced domestic and export demand Anticipated job losses (if cases continue to rise) = 3,964
Mining	CUTS (2020)	Zambia's copper exports are likely to reduce further than the 11% decline registered in February 2020 as the impacts of COVID-19 have since intensified Anticipated job losses (if cases continue to rise) = 7,467
	ICA (2020)	At least 200 jobs lost between February and May 2020 (from a sample of 416 companies)
Retail	CUTS (2020)	Import reductions due to COVID-19 restrictions in origin countries Anticipated job losses (if cases continue to rise) = 14,634 Anticipated job losses (as a result of full lockdown) = 29,267

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As key partners in growing an inclusive Zambian economy, Prospero and BCCET recognise the need to ensure that the negative economic impact of COVID-19 is minimised as much as possible. Thus, Prospero engaged the services of AMSCO Zambia to develop helpful industry-level guidelines for business entities to adopt and use as a way to responsibly keep the private sector as productive as possible while reducing the spread of the virus. These guidelines are in the form of SOPs, and have been developed in consultation with key stakeholders in the 13 identified sectors.

Scope of these SOPs

This document contains COVID-19 SOPs for 13 industry sectors listed in Table 1.

Table 1: Important Definitions	
Tourism – Hotels	An establishment providing accommodation, meals, and other services for travellers and tourists. Lodges and Airbnb™ establishments will be grouped under hotels. Meetings, Incentives tours, Conferences and Exhibitions/Events (MICE) services will also be considered here.
Tourism – National Parks	Areas of countryside, or occasionally fresh water, protected by the State for the enjoyment of the general public or the preservation of wildlife. All aspects from entry, accommodation, picnicking, hunting, fishing, camping, hiking, and others, will be considered.
Air Travel	Travel by air aspects will include: At the departure airport (arrival, waiting, processing documents, restaurants, conveniences, baggage checking, exit); on the plane (baggage, conveniences, eating and drinking); and at the arrival airport (arrival, waiting, processing documents, restaurants, conveniences, baggage claim, exit).
Informal Sector	Every sector has an informal sector. For every SOP developed, the informal sector side of it will have its guidelines embedded. It should be noted that this sector is generally unregulated.
Retail	The retail side of business is directly linked to most of the other sectors as part of

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	<p>their supply chain. The following retail constituents will be considered in the development of guidelines for the sector:</p> <ul style="list-style-type: none"> • Goods: supermarkets, stores, markets (with clear distinction between consumables, equipment and clothing) • Services: automotive, beauty, ICT
Mining	Both small-scale and large-scale extraction is considered. The process from prospecting to production will be included.
Private Medical Care	This sector includes private practice only. For purposes of comparison, public medical SOPs may be reviewed.
Trucking	In the traditional supply chain, trucking facilitates the distribution channel. In these SOPs, trucking will include any vehicle which transports goods between the source of raw materials and the user of the end product.
Clearing	This implies the importation or exportation of goods through a port of entry. Procedures at airports, inland ports and border points will be developed.
Banking and Financial Services	This includes banks and banking halls, ATMs and mobile banks for commercial banking. For mobile money operators, SOPs for kiosks will be the main focus. As microfinance institutions (MFIs) and village banking are more at community level, promoting their services at household level and door-to-door, specific SOPs will be developed.
Education	The sector has very high human-to-human contact of people of varying ages. The SOPs for the education sector therefore cover all stages from reception to tertiary levels, and make reference to staff and students alike.
Agriculture	<p>The main agro sub-sectors will be considered:</p> <ul style="list-style-type: none"> • Crops: cereals, vegetables and fruits • Livestock: poultry, beef, dairy, pork, and fish
Manufacturing	The major forms of manufacturing apply: consumables (food and beverage), and clothes. Note: The informal sector for manufacturing is vast.
Property Management	This covers residential, commercial and land.
Informal Sector	Each sector has been deemed to have an informal aspect which will be addressed on a sector by sector basis. However, SOPs for markets, bus stations and home-based businesses will be developed.
Construction	The SOPs will focus on building and road construction.

Structure of the SOPs

What is a Standard Operating Procedure?

Standard Operating Procedures are step-by-step instructions for carrying out specific activities within an organization, an industry or a sector. For example, SOPs may describe how food is prepared, packaged and sold, or how products are stocked and restocked.

SOPs are valuable tools that are used to ensure that activities are undertaken consistently and to a high standard. They are used in business to stipulate how the activities will be undertaken. They provide quality assurance that the actions and products will be consistent and therefore comparable and safe.

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Why have Standard Operating Procedures?

The advantages of SOPs are that they:

1. Provide personnel with numbered step-by-step instructions on a specific procedure (or procedure used to carry out a method) with minimum variability;
2. Ensure that the procedures are performed consistently and in compliance with government regulations;
3. Protect the health and safety of personnel by enabling jobs to be carried out in the safest possible way, and ensure that all of the safety, health, environmental and operational information is available to perform specific procedures with minimal impact;
4. Facilitate training in procedures, for both new personnel and for those that need re-training (e.g. after extended absence from a position);
5. Serve as a historical record for use when modifications are made to that procedure and when the SOP is revised;
6. Promote quality through consistent collection of data, even if there are changes in the people undertaking the survey or monitoring; and
7. Encourage improvements and work evaluation by ensuring that the procedures are completed, and can be used in incident investigations to improve operations and safety practices.

About these SOPs

The SOPs are industry and sector specific and take into account local nuances and differences between provinces and districts. All aspects of the supply chain are considered, including customer management, supply management and premises management. The SOPs also provide COVID-19 incident and case management procedures that outline care and risk mitigation, should someone at work be identified as having contracted COVID-19, or is at risk due to being in contact with individual(s) outside of the workplace who have contracted COVID-19.

The industry SOP documents set out guidance on how to work safely and offer practical considerations of how this guidance can be applied in the workplace. Each industry SOP document outlines both Mandatory SOPs and Advisory SOPs.

Each includes (but is not limited to) the following components:

- a) Industry level introduction;
- b) Overview on how to use the SOP guidance;
- c) Overview on the definition of what is meant by components of each industry;
- d) How each industry should think about and assess risk;
- e) Who should go to work;
- f) Social distancing at work;
- g) Managing customers, visitors and contractors;
- h) Cleaning the workplace;
- i) Personal Protective Equipment (PPE) and face coverings;
- j) Workforce management;
- k) Inbound and outbound goods;
- l) Where to obtain further assistance;
- m) Appendices: Forms, tools, checklists.

The **SOP guidance document per industry** articulates those that are mandatory according to the government, and some industry standards, and those that are advisory SOPs.

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The SOPs will include the following key sections:

- a) Background to the development of New-Normal SOPs;
- b) List of sectors, sub-sectors and supply chains;
- c) Generic full supply chain SOPs for COVID-19;
- d) Specific SOPs (by industry/sector) with embedded COVID-19 protocols;
- e) Purpose of the NAMED INDUSTRY SOPs;
- f) Introduction;
- g) Overview on how to use the SOP guidance;
- h) Definitions;
- i) Risk assessment and documentation;
- j) Work schedules and responsibilities;
- k) Specific procedures:
 - i. Social distancing at work;
 - ii. Managing customers, visitors and contractors;
 - iii. Cleaning the workplace;
 - iv. Personal Protective Equipment (PPE) and face coverings;
 - v. Workforce management;
 - vi. Inbound and outbound goods
- l) Forms and templates to be used;
- m) Where to obtain further assistance;
- n) Appendices: tools, forms, checklist.

Approach

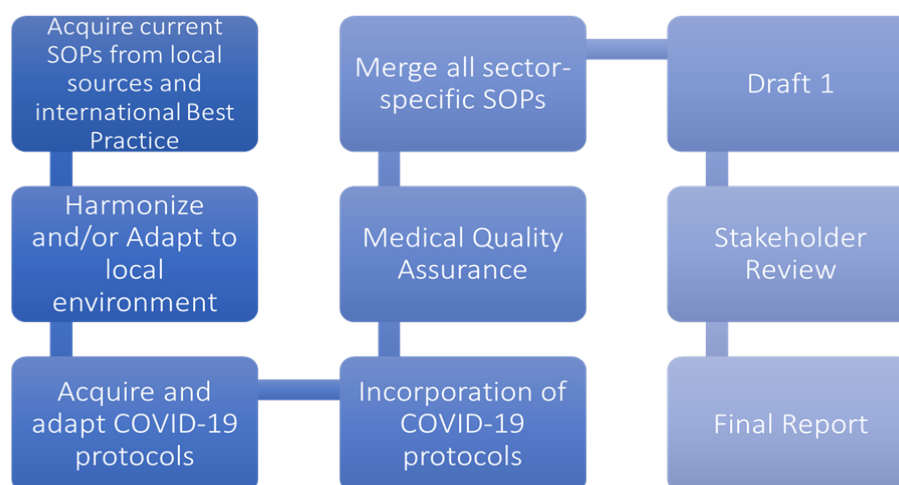


Figure 1: The Approach Layout

The first stage included the review of SOPs currently in use in Zambia and around the globe. Each sector had at least three case SOPs for use in developing a harmonised SOP for their sectors and supply chains. Sector experts in the selected sectors were engaged to utilise their knowledge, experience and networks to access these harmonised best practices. Each industry expert proceeded to embed COVID-19 protocols in the SOP for their sectors and supply chains. Embedded SOPs were then reviewed by a qualified public health practitioner for COVID-19 norms and practices. This was followed by merging all

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the sector-specific SOP documents into one, which was sent to stakeholders for review and validation before finalization.

About COVID-19

What is COVID-19?

COVID-19 is a disease caused by a new strain of coronavirus. 'CO' stands for corona, 'VI' for virus, and 'D' for disease. Formerly, this disease was referred to as '2019 novel coronavirus' or '2019-nCoV.' The COVID-19 virus is a new virus linked to the same family of viruses as Severe Acute Respiratory Syndrome (SARS) and some types of the common cold.

What are the symptoms of COVID-19?

Symptoms can include a fever, coughing and shortness of breath. In more severe cases, infection can cause pneumonia or breathing difficulties. More rarely, the disease can be fatal. These symptoms are similar to those of the flu (influenza) or the common cold, which are a lot more common than COVID-19. This is why testing is required to confirm if someone has COVID-19.

How does COVID-19 spread?

The virus is transmitted through direct contact with respiratory droplets of an infected person (generated through coughing and sneezing). Individuals can also be infected by touching surfaces contaminated with the virus and touching their face (e.g., eyes, nose, mouth). The COVID-19 virus may survive on surfaces for several hours, but simple disinfectants can kill it.

Who is most at risk?

We are learning more about how COVID-19 affects people every day. Older people, and people with chronic medical conditions, such as diabetes and heart disease, appear to be more at risk of developing severe symptoms. As this is a new virus, we are still learning about how it affects children. We know it is possible for people of any age to be infected with the virus, but so far there are relatively few cases of COVID-19 reported among children. This is a new virus and we need to learn more about how it affects children. The virus can be fatal in rare cases; so far mainly among older people with pre-existing medical conditions.

What is the treatment for COVID-19?

There is no currently available vaccine for COVID-19. However, many of the symptoms can be treated and getting early care from a healthcare provider can make the disease less dangerous. There are several clinical trials that are being conducted to evaluate potential therapeutics for COVID-19.

How can the spread of COVID-19 be slowed down or prevented?

As with other respiratory infections like the flu or the common cold, public health measures are critical to slowing the spread of illnesses. Public health measures are everyday preventive actions that include:

- Staying home when sick;
- Covering the mouth and nose with flexed elbow or tissue when coughing or sneezing. Dispose of used tissue immediately;
- Washing hands often with soap and water; and
- Cleaning frequently touched surfaces and objects.

As more is learnt about the new COVID-19, public health officials may recommend additional actions. It is important for businesses and households to stay informed about changes in the characteristics of COVID-19 in order to understand the public health directives and, also, in order to adapt quickly.

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General Guidance for Employers and Businesses

Getting your workplace ready for COVID-19¹

How COVID-19 spreads

When someone who has COVID-19 coughs or exhales, they release droplets of infected fluids. Most of these droplets fall on nearby surfaces and objects – such as desks, tables or telephones. People could catch COVID-19 by touching contaminated surfaces or objects – and then touching their eyes, nose or mouth. If they are standing within 1 m of a person with COVID-19, they can catch it by breathing in droplets coughed out or exhaled by them. In other words, COVID-19 spreads in a similar way to the flu. Most persons infected with COVID-19 experience mild symptoms and recover. However, some go on to experience more serious illness and may require hospital care. The risk of serious illness rises with age: people over 40 seem to be more vulnerable than those under 40. People with weakened immune systems and people with conditions such as diabetes, heart and lung disease are also more vulnerable to serious illness.

Advice on the following can be found in Appendix 3:

1. Simple ways to prevent the spread of COVID-19 in your workplace
2. How to manage COVID-19 risks when organizing meetings and events
3. Things to consider when you and your employees travel
4. Getting your workplace ready in case COVID-19 arrives in your community

¹ <https://www.who.int/docs/default-source/coronaviruse/getting-workplace-ready-for-covid-19.pdf>

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I. Agriculture

A. SOP for COVID-19 Mitigation Measures in Cereals

Department: _____

SOP No: _____

SOP Title: _____

SOP Number _____

SOP Title _____

	NAME	TITLE	SIGNATURE	DATE
Author				
Reviewer				
Authoriser				

READ BY				
	NAME	TITLE	SIGNATURE	DATE

PURPOSE

This standard operating procedure (SOP) describes the suggested process to prevent the spread of COVID-19 disease during the planting and harvesting of cereal crops and in compliance with FAO, WHO, CDC guidelines and Ministry of Health COVID-19 protocols in the agro processing sector industry.

SCOPE

These SOPs apply to the agriculture sector specifically in the growing, and harvesting of cereal crops to stop the spread of COVID-19 using the WHO, CDC and Ministry of Health guidelines on prevention of COVID-19.

INTRODUCTION

COVID-19 is a respiratory disease spread through human-to-human transmission via droplets. Many other viruses in the coronavirus family find their origin in animals. The COVID-19 virus (also called SARS-CoV-2) is a new virus in humans. The possible animal source of COVID-19 has not yet been confirmed but research is ongoing.

These SOPs have been adapted from www.financialexpress.com and the WHO and COVID-19 prevention measures have been embedded to these SOPs to prevent the spread of COVID-19 pandemic.

DEFINITIONS

Social distancing	Also called “physical distancing,” means keeping a safe space between yourself and other people who are not from your household.
Handwashing	Also known as <i>hand</i> hygiene, is the act of <i>cleaning</i> one's <i>hands</i> with <i>soap</i> (or equivalent materials) and water to remove viruses/ bacteria/germs/ microorganisms, dirt, grease, or other harmful and unwanted substances stuck to the <i>hands</i> .

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Personal Protective Equipment	Equipment that will protect the user against health or safety risks at work. It can include items such as safety helmets, gloves, eye protection, high-visibility clothing, safety footwear and safety harnesses. It also includes respiratory protective equipment (RPE).
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RESPONSIBILITIES

A. Farm Manager

1. Ensure that no person is be allowed to enter the field farm without a face mask either for planting or harvesting maize crops or wheat.
2. Ensure that the field has hand-hygiene facilities (handwashing with soap or alcohol-based hand sanitiser) at each entry point and multiple other places within the farm or cultivation fields.
3. Ensure that at delivery, maize seed, fertilizers and other farming input only a maximum of 2 people per vehicle/car should be allowed and elderly people and children should not be allowed to enter the farm.
4. Ensure every person entering the farm area is screened and has their temperature checked and if above 37°C is not allowed entry.
5. Ensure that all farm workers are advised not to share face masks or face covering with anyone and must avoid touching the insides of a mask/face covering but use new face mask immediately if the mask is soiled or becomes wet.
6. Ensure that the farm or cultivation fields have functional toilets and handwashing facility with essentially required supplies including anti-bacteria soap, tissues and paper towels.
7. Hand sanitiser use should be strongly recommended after exchanging tools or touching shared surfaces within the farm.
8. Ensure high-touch surfaces like door handle storerooms or toolsheds, garden taps, table counter tops are cleaned with detergent and disinfected with 0.1% hypochlorite solution frequently.
9. Ensure thermal scanning of all staff and visitors by trained personnel at all entry points.

B. Farm Owners or Production Manager

1. Ensure awareness of COVID-19 by all employees and its impact on growing of maize/wheat.
2. Ensure arrangement of all protective gears to avoid the spread of COVID-19 virus (sanitiser, soap etc.) for the workers/hands. The workers while entering in the farm should follow the sanitary norms and may change the dress they have used while travelling and should use the disinfected cloths while working inside the farm.
3. Ensure testing becomes more readily available to all the workers to rapidly identify and address COVID-19 at the farm estate.
4. Educate all workers on how to prevent COVID-19 infections and spread of the disease.
5. Ensure that thermal scanners are available on the farm for body temperature screening.
6. Ensure that employees are informed of all new developments on the disease (COVID-19). Brief them on the need for infection control measures and the preventive procedures that have been set in place.
7. Ensure all employees are aware of the COVID-19 Emergency help; COVID-19 HOTLINE Toll Free: 909, Mobile +260 97 4493553 or Mobile +260 96 4638726.
8. Ensure there is a contact and liaison person for all Ministry of Health-related updates.
9. Ensure that a record of all employees present at a given date and time are kept for contact tracing by supervisors and managers in various departments.

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10. Be alert and able to execute emergency procedures for any worker who becomes symptomatic of COVID-19 while at work.
11. Arrange adequate facilities for medical check-up or screening of farm workers and labourer's with the Health Department of each district. Medical Screening Team should also make aware the workers aware about the symptoms related to COVID-19 and preventions (social distancing etc.) along with procedure to be followed related to it.
12. Buy maize seed and other farm inputs from local suppliers if possible, and limit movement of workers within the farm areas only if possible, to avoid any possible spread of the virus.

SPECIFIC PROCEDURE

The SOPs of cereal growing may consist of 2 parts:

- A. **Cereal Planting** (maize, soya beans, wheat, rice, sorghum, millet)
- B. **Cereal Harvesting** (maize, soya beans, wheat, rice, sorghum, millet)

A). CEREAL PLANTING (maize, soya beans, wheat, rice, sorghum, millet)

1. These SOPs are to guide farmers on safety precautions that need to be strictly adhered to during planting and harvesting of crops amid the threat of COVID-19 pandemic.
2. If any farm worker develops symptoms like cough, headache, body ache, shortness of breath, nasal congestion, runny nose and sore throat etc., they should immediately communicate with the health and safety officer and eventually to the public health department.
3. It is recommended that farm workers should wash their hands, legs and face with soap when coming out of the field for lunch or break.
4. When preparing land for planting of cereal crops like maize or rice, farmers should minimise human labour and use tractor driven machineries. Farmers should use equipment like tractors, seed planters, fertilizer drills and reduce the number of workers in the field.
5. All farm equipment from hoes, seed drill, ploughs, to tractors should be sanitised before use. Those working in the farm field should wear face masks or cover their faces. If possible, each worker should have a separate utensil and clean its handles with soap after use.
6. Empty seed bags must be discarded and not given to farm workers for re-use. It is also recommended that after the day's work, farmers should bath and wash their clothes with soap and sundry.
7. Unnecessary visits on farms shall not be permitted inside the farm until the situation becomes normal.
8. Farm management shall declare and share the list of workers/personnel to the District Health Department for maintaining the details in the register.
9. All farm workers must provide contact details of their family members/relatives for contact tracing in case of a positive test case of COVID-19.
10. The farm workers should be advised that no physical contacts or exchanges of items should be made by them with workers of adjacent farms, if any.
11. Proper bio-security measures like footbath; tyre-wash/vehicle wash, hand and leg dip should be provided in order to avoid cross-contaminations.
12. The tractor drivers should enter their proper movement details in the farm movement book and details may also be shared on a daily basis with the production manager or supervisors.

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Social distancing

1. Social distancing and sanitization norms should be followed during field preparation, planting and fertilizer application. Farm workers/labourer's should maintain a social distance at least 1-2 m during farm operations. If possible, farm workers should be assigned separate duties with regard to farm activities in different places. For other operations like weeding and spraying of fertilizers/pesticides, farmers or workers must follow all protocols of social distancing and sanitise the equipment.
2. Before planting crops each farm worker should be screened and while in the field planting maintain a working physical distance 1-2 m. Workers can start planting in different parts of the field. For example, some can be planting facing the east-west direction while others facing the north-south direction.

B). CEREAL HARVESTING (maize, soya beans, wheat, rice, sorghum, millet)

1. For harvesting of maize crops, farmers should utilise mechanised harvesting and threshing, and maintain 1-2 m social distancing during harvesting, threshing, packaging, eating and resting.
2. After harvesting, farmers should be requested to keep farm produce in the open, preferably under the sun for 48 hours before storing.
3. Farm workers must wash their hands before picking up Personal Protective Equipment (PPE) and before handling crops.
4. Farm workers and fishermen should wear disposable gloves when handling or harvesting maize.
5. All farm workers must be educated on how to cough or sneeze in a bended elbow.
6. If any worker is reported sick and develops any symptoms like coughing, headache, fever, body ache, shortness of breath, nasal congestion, runny nose, and sore throat while harvesting, the harvesting activity should be abandoned and the district health department should be contacted immediately.
7. The maize silo or warehouses should be disinfected regularly with sodium hypochlorite solution.
8. People with a fever or respiratory symptoms are advised not to visit the maize storage area.
9. No handshake or hugging is allowed with anyone while gatherings of more than 5 persons at one place within the maize storing area should not be allowed.
10. Set up weekly medical camps or clinics, with adequate staffing of trained personnel, equipment and PPE can be established at the processing plant or farm by concerned District Health Authority. Any person detected with a high temperature will be referred to medical camps for further assessment. Staff and visitors suffering from a cough should be immediately separated and referred for further medical assessment.
11. Let all employees accessing the other plant processing office for packaging materials sanitise their hands before touching door handles or office equipment.
12. Where feasible place physical barrier between workers on the production line and identify opportunities to place physical barriers e.g., boards, cloth, material or plastic sheeting in hallways to guide employee traffic to/from production and limit crossover.

I) Social distancing

1. As farmers harvest small group gatherings when piling, the harvest must be discouraged.
2. When distributing empty grain bags to farm workers, farm supervisors should ensure farmers are lined up 1.5 m apart.
3. Plan and execute the crop harvest activities in such a manner so as to maintain proper

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monitoring and social distancing.

4. All the farm workers shall be subjected to thermal scanning at the entrance while observing social distancing.
5. Social distancing should be adhered to by workers at the canteens and on lunch tables for tables with built-in seating. Strategies be put in place to ensure social distancing during breaks such as limiting chairs per table.
6. Staggered breaktimes to avoid large groups of farm workers at once.
7. Additional rooms designated for break areas or pitch tents outside.
8. Ensure cleaning of tables between use by self-cleaning .

II) Administrative Controls

Administrative control measures available for COVID-19 include policies, procedures, training, and workplace practices. Ineffective policies or practices or inconsistent compliance may heighten exposure risks.

1. Universal Mask Policy – This Policy should be put in place for all employees and essential visitors to wear face masks at all times while in the cereal processing facility.
2. Provide employees with information on proper PPE use such as face mask use.

III) Communication/Education

1. Provide easy to understand information (e.g., posters, infographics) that can be translated into the multiple languages spoken by workers. Post multilingual signage throughout the facility directing risk-minimizing behaviour for employees such as:
 - a. Handwashing procedures
 - b. COVID-19 symptoms and how to stop the spread
 - c. Screening process/requirements
 - d. Resources on social distancing outside of workplace (e.g., in homes, car sharing or pooling)
 - e. Proper hand hygiene and glove practices and refraining from touching their face
 - f. General guidance for worker protection at home and in the community
 - g. Information on self-monitoring of COVID-19 symptoms
 - h. Information to n safe social distancing practices
2. Provide information to employees on basic protective measures against COVID-19 such as:
 - a. Handwashing procedures
 - b. Staying home when sick
 - c. Avoiding contact with people who are sick
 - d. Following guidance of local and state public health officials on staying home and avoiding unnecessary trips outside of the home
 - e. Engaging local community leaders (e.g., church leaders, chiefs) to help educate and relay COVID-19 message to community members
 - f. Encouraging workers to wear cloth masks when using public transport to work (if car sharing) and to protect others when waiting to be screened prior to them receiving a new mask for their shift
 - g. Encouraging workers to minimise car sharing as they travel to work
 - h. Limiting the number of people per vehicle and space out when using company vehicles

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IV) Enhanced cleaning and disinfection of common contact areas

1. Identify common high-touch surfaces (e.g., tables, door handles) and develop a checklist to ensure frequent sanitization throughout the day
2. Hand sanitiser dispensers should be available throughout the facility, particularly at entrances, exits, and transition areas
3. Assess supply of cleaning supplies, sanitisers, and disinfectants and encourage their practical use
4. Sanitizing wipes and soap readily available in lunch and breakrooms
5. Identify common shared tools and develop procedures to sanitise between users
6. Implement a process for routine deep cleaning of common areas, either daily/nightly or, at minimum, weekly
7. Use no-touch containers when possible

V) Active Screening

1. Designate a single point of entry for all farm workers and visitors
2. Develop and implement screening questions conducted daily for all individuals entering the farm
3. Employees are subject to daily temperature screening prior to entering the farm
4. Ensure screener is trained to administer the temperature checks
5. Ensure screener has adequate PPE and, as applicable, maintains social distancing as testing is performed
6. Secondary screening, if offered, should be conducted by staff with medical training
7. For contact with high-touch surfaces, keep doors open to allow movement

VI) Personal Protective Equipment (PPE)

Train all workers on proper use of Personal Protective Equipment:

1. Measures to distribute daily cycled PPE to avoid unnecessary touching by multiple workers
2. Ensure adequate PPE provided to all farm workers
3. PPE should be worn correctly by all workers
4. Emphasise proper hand hygiene after gloves or facial coverings are removed
5. Checklist/instructions posted for donning (putting on)/doffing (taking off) PPE in multiple languages

VII) Managing a COVID-19 positive case

1. Access to the farm to be blocked for all farm workers and staff. The area should be cordoned off and the place be disinfected with approved cleaning chemicals to avoid further spread of COVID-19;
2. Activate process to contact relevant third parties who may have been exposed;
3. Clean and disinfect surfaces to limit employee exposure;
4. Work with local authorities to take appropriate steps;
5. Develop a return to work policy in coordination with local public health department;
6. Identify workplace coordinators for COVID-19 issues and their workplace impact;
7. Coordinators should be known and accessible to all;
8. Coordinators to serve as the main source of information and primary person(s) to answer questions related to COVID-19 (e.g., Occupational Health, Plant Safety Manager);
9. Provide farm supervisors additional training on COVID-19 and PPE so they can provide effective and reliable communications to workers and monitor for protective measures and PPE compliance;

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10. Cross-train workers to perform essential functions to maintain operations;
11. Developed a testing strategy in coordination with local public health officials;
12. Work with local and state public health officials to conduct testing of priority cases.

INTERNAL AND EXTERNAL REFERENCES

1. Westerly Breeze farm
2. Mayo Agro Services
3. www.financialexpress.com
4. www.unmc.edu/healthsecurity/education/programs/docs/Checklist.pdf

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B. SOP for COVID-19 mitigation measures in Fruits and Vegetables

Department: _____

SOP No: _____

SOP Title: _____

SOP Number: _____

SOP Title: _____

	NAME	TITLE	SIGNATURE	DATE
Author				
Reviewer				
Authoriser				

READ BY				
	NAME	TITLE	SIGNATURE	DATE

PURPOSE

To prevent the spread of COVID-19 by farm workers in fruits and vegetable production and packaging on Zambian farms in compliance with WHO, CDC and Ministry of Health guidelines COVID-19 protocols.

SCOPE

This procedure applies to farm workers or employees who handle and package fresh vegetables/fruits to stop the spread of COVID-19 using the WHO, CDC and Ministry of Health guidelines on prevention of COVID-19.

INTRODUCTION

COVID-19 is a respiratory disease caused by the coronavirus and spreads through droplets via human-to-human contact. These SOPs have been adapted from the Hazard Analysis Critical Control Point System (HACCP) Standard Operating Procedures, and COVID-19 prevention measures have been embedded into these SOPs to prevent the spread of the COVID-19 pandemic.

DEFINITIONS

Social distancing	Also called “physical distancing,” means keeping a safe space between yourself and other people who are not from your household.
Handwashing	Also known as <i>hand</i> hygiene, is the act of <i>cleaning</i> one's <i>hands</i> with <i>soap</i> (or equivalent materials) and water to remove viruses/bacteria/germs/microorganisms, dirt, grease, or other harmful and unwanted substances stuck to the <i>hands</i> .
Personal Protective Equipment	Equipment that will protect the user against health or safety risks at work. It can include items such as safety helmets, gloves, eye protection, high-visibility clothing, safety footwear and safety harnesses. It also includes respiratory protective equipment (RPE).

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RESPONSIBILITIES

A. Production Manager or Supervisor

1. To educate the farm workers on the dangers of COVID-19 and its implication on fruit and vegetable production.
2. To train farm workers on using the procedures in this SOP.
3. Train all employees and visitors to wash their hands regularly with soap and make handwashing easy by putting a wash stand within reach of many.
4. Ensure handwashing stands are placed at key locations around the farm, such as in the field, near bathrooms/toilets and near packing facilities.
5. Train workers on how to wear masks properly, dispose off them, or clean re-usable masks.
6. Place hand sanitisers at every entrance and exit of the farm.
7. Ensure social distancing at the farm as farm workers work.
8. Ensure sick workers or visitors do not enter the farm or go near the vegetables.
9. Ensure the placing of signs on the farm. Communicate to farm workers and truck drivers using clear signage around the farm. The signs should show where the handwashing stations and where the bathroom/toilets are. Place signs to let people know your policies including where to stand, what boxes to touch or not to touch, handwashing and sanitizing points.
10. Truck drivers to be screened before entering a farm: their temperature checked, their hands washed or sanitised. If there is any exchange of delivery-notes and signing of any document's, pens should be sanitised by wiping them with an alcohol-based sanitiser alongside hands before touching books or papers.
11. Earlier communications should be sent to transport companies e.g. send emails, or call or email customers who might be picking up vegetables from the farm. The new policies should be communicated to the transport companies reminding them of the company policies.
12. Ensure adherence to biosecurity measures: delivery trucks/vans must drive through a footbath containing liquid disinfectants or its tyres sprayed with a disinfectant.
13. Workers must wear rubber gumboots, gloves, clean overalls and must sanitise their hands before picking or touching vegetables.
14. All farm workers must wear masks at all times and have their body temperatures checked as they report for work before entering the farm premises.
15. Movements for those living on the farm (farm quarters) must be minimised to reduce the exposure to COVID-19 and transmission.
16. Social distancing of 2 m be observed as farm workers carry out their duties and as they take lunch breaks. In greenhouses, a bucket of water containing a disinfectant or soap must be placed at the entrance and a footbath created.
17. All farm workers to wash their work clothes or overalls using a detergent washing soap before they close for the day.
18. Social distancing should be maintained as farm workers have their meals.
19. Farmers should cough with a flexed elbow when coughing or sneezing.
20. All vegetables must be washed with clean running water before they are packed into boxes or containers.
21. Surfaces such as counter tops or tables used to package vegetables must be cleaned regularly.
22. Door handles of store rooms and tool sheds must be thoroughly disinfected first thing in the morning and knocking-off time. All tool and equipment handles must be disinfected or sanitised before being used by farm workers.
23. Farm workers must be encouraged to thoroughly wash their hands with soap in intervals as they harvest, collect and package the vegetables.
24. Vegetables must be thoroughly washed and covered before leaving the farm.
25. Ensure drivers sanitise their hands before signing delivery notes and stock taking.

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26. Reduce cross-contamination at delivery points: use disinfectant wipes for things like pens and pencils, clipboards, surfaces where boxes are left, and door handles.
27. Ensure proper stacking of boxes or containers so that people won't have to touch multiple boxes in order to find theirs.
28. Document the precautions the farm is taking at farm or any delivery sites. These records are helpful to show the measures your farm is taking in keeping your customers safe.
29. All the workers collecting the vegetables must be wearing masks, gloves and receiving bays must be kept clean by disinfecting/sanitizing. Social distancing must be observed by those collecting vegetables
30. Before cash pay-outs are made for vegetables supplied, both the cashier the one receiving the money must keep a social distance, wear a mask, and sanitise before and after exchanging the money.
31. Isolate a suspected infected person and call the COVID-19 HOTLINE Toll Free: 909 Mobile or Toll-Free: 909 or Mobile +260 97 4493553 or Mobile +260 96 4638726.
32. All fruit and vegetable handlers that came in contact the an ill person must be tested for COVID-19 and contact tracing must be implemented.

B. Human Resource Manager

1. Ensure only essential workers report for work i.e. production, transport, security personnel among others.
2. Reduce the workforce by rotation i.e. work with half number of staff to keep social distance and avoid crowding of employees.
3. Ensure proper and timely communication on COVID-19 updates to all employees.
4. Keep employees apprised of their rights and the tools that you are providing to support them.
5. Educate all workers on how to prevent COVID-19 infections and spread of the disease.
6. Review your sickness policy, be sure it is up to date, and give all employees the most recent version.
7. Recommend implementing measures that reduce the risk of workplace transmission. These risk reduction steps should include:
 - a) Regularly sanitise all tools and surfaces.
 - b) Increase access to hand sanitiser and handwashing stations.
 - c) Create workstations that are at least 2 m apart.

C. Fruit and Vegetable Packer

1. Obtaining supplies of products and assembling bags, package folders and cartons.
2. Packing containers and bags with products, and counting, weighing and measuring amounts and adjusting quantities.
3. Wrapping protective material around products, sealing bags and containers, and attaching pre-printed labels.
4. Counting and placing bags and packages onto trays and racks, and into shipping cartons.
5. Recording information such as numbers, weight, times and dates.
6. Monitoring the filling of containers and adjusting machines to maintain volume and seal quality.
7. Monitoring the supply and quality of containers and contents of holding tanks.
8. Checking the cleanliness and operation of machines, equipment and containers.

SPECIFIC PROCEDURE

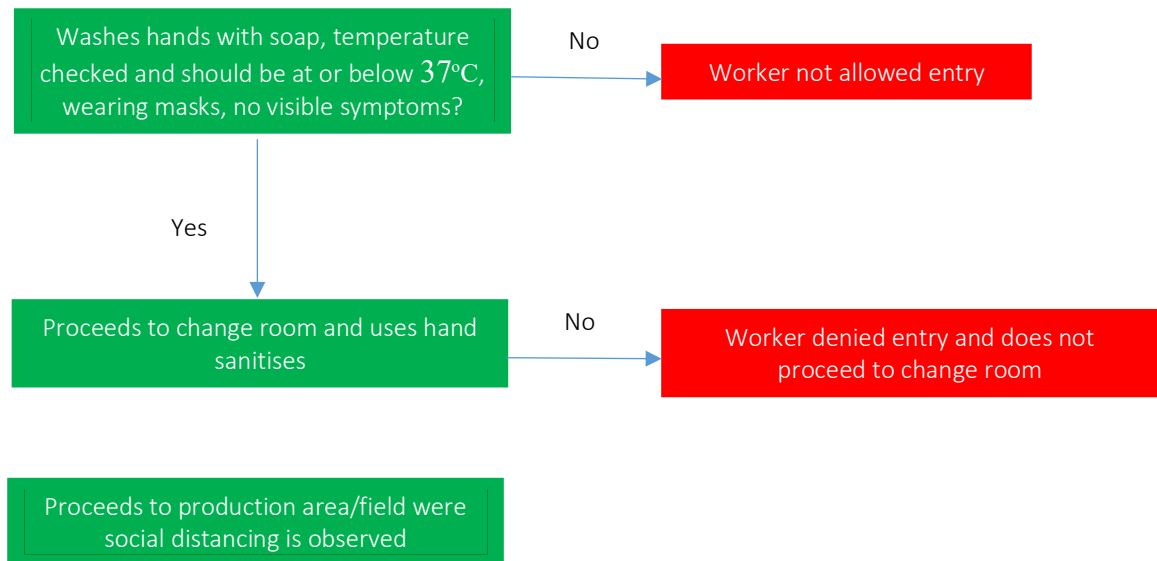
- a) This section is the main text of the SOP. It will detail the procedure for the task to be performed within, between and adjacent to the various nodes in the supply chains.
- b) There will be sufficient detail, clearly expressed, to enable a trained person to perform the

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procedure without supervision.

- c) There will also be sufficient detail to enable a trained person to use the document to train others to perform the task.
- d) Flow diagrams will be used, especially in complex procedures.

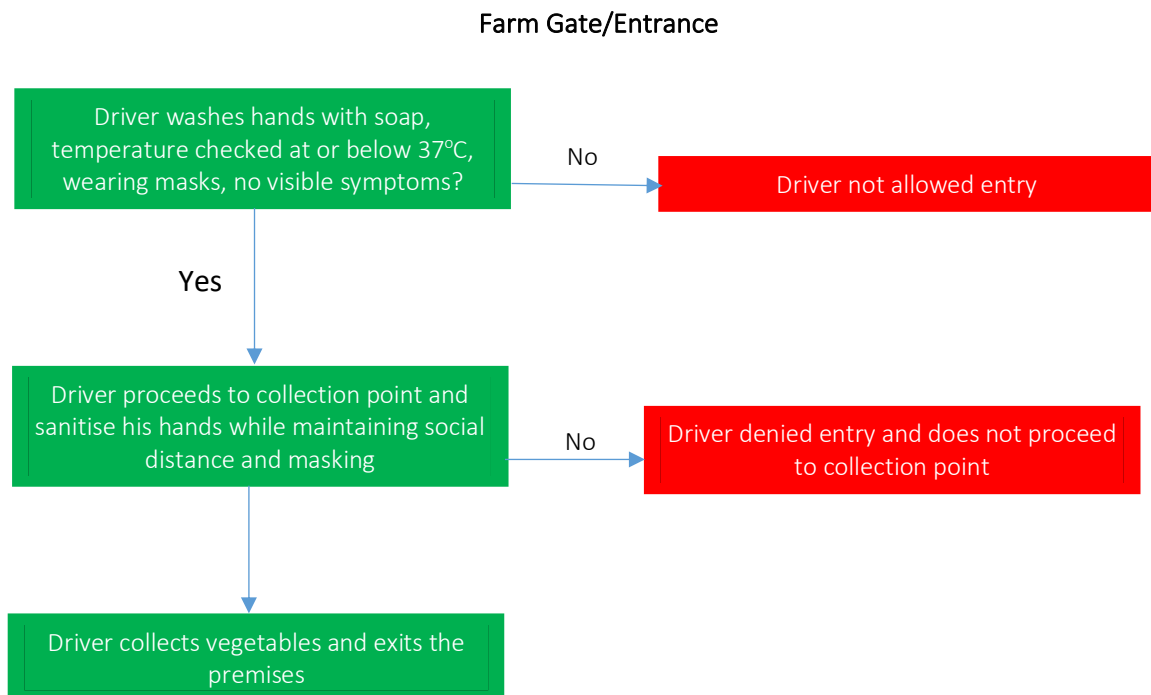
Work flow diagram daily report routine for farm workers Farm Gate/Entrance



A. Work flow diagram for vegetable collection or pick up

1. Before delivery trucks are allowed entry into a farm premises, biosecurity measures must be followed.
2. The vehicle tyres must be sprayed or drive through a footbath containing a disinfectant.
3. The driver must also be screened by having his/her temperature checked, wearing a mask, wash their hands or sanitise.
4. If there is any exchange of delivery-notes and signing of any documents, pens should be sanitised by wiping them with an alcohol-based sanitiser alongside hands before touching books or papers, or folders.

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B. Washing Fruits and Vegetables

1. Train foodservice employees on using the procedures in this SOP.
2. Wash hands using the proper procedure.
3. Wash, rinse, sanitise, and air-dry all food-contact surfaces, equipment, and utensils that will be in contact with produce, such as cutting boards, knives, and sinks.
4. Follow manufacturer's instructions for proper use of chemicals.
5. Wash all raw fruits and vegetables thoroughly before combining with other ingredients, including:
 - a) Unpeeled fresh fruit and vegetables that are served whole or cut into pieces.
 - b) Fruits and vegetables that are peeled and cut to use in cooking or served ready-to-eat.
6. Wash fresh produce vigorously under cold running water. Packaged fruits and vegetables labelled as being previously washed and ready-to-eat are not required to be washed.
7. Scrub the surface of firm fruits or vegetables such as apples or potatoes using a clean and sanitised brush designated for this purpose.
8. Remove any damaged or bruised areas.
9. Label, date, and refrigerate fresh-cut items.
10. Serve all cut produce within 7 days if held at 41° F or below. Refer to the date marking ready-to-eat and the Potentially Hazardous Food SOP.

C. Washing Hands

To prevent food borne illness by contaminated hands.

1. Post handwashing signs or posters in a language understood by all foodservice staff near all handwashing sinks, in food preparation areas, and restrooms.
2. Use designated handwashing sinks for handwashing only. Do not use food preparation, utility, and dishwashing sinks for handwashing.
3. Provide warm running water, soap, and a means to dry hands. Provide a waste container at each handwashing sink or near the door in restrooms.

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4. Keep handwashing sinks accessible anytime employees are present.
5. Wash hands
 - a) Before starting work.
 - b) During food preparation.
 - c) When moving from one preparation area to another.
 - d) Before putting on or changing gloves.
 - e) After using the toilet.
 - f) After sneezing, coughing, or using a handkerchief or tissue.
 - g) After touching hair, face, or body.
 - h) After smoking, eating, drinking, or chewing gum or tobacco.
 - i) After any clean-up activity such as sweeping, mopping, or wiping counters.
 - j) After touching dirty dishes, equipment, or utensils.
 - k) After handling trash.
 - l) After handling money.
 - m) After any time, the hands may become contaminated.
6. Follow proper handwashing procedures as indicated below:
 - a) Wet hands and forearms with warm, running water at least 100°F and apply soap (about 1 tablespoon).
 - b) Scrub lathered hands and forearms, under fingernails, and between fingers for at least 10-15 seconds. Rinse thoroughly under warm running water for 5-10 seconds (minimum of 20 seconds for complete wash and rinse process).
 - c) Dry hands and forearms thoroughly with single-use paper towels.
 - d) Dry hands for at least 30 seconds if using a warm air hand dryer.
 - e) Turn off water using paper towels.
 - f) Use paper towel to open door when exiting the restroom.

D. Receiving Deliveries

To ensure that all fruits and vegetables are received fresh and safe when they enter the foodservice operation and to transfer to proper storage as quickly as possible.

1. If possible, schedule deliveries to arrive at designated times during operational hours.
2. Post the delivery schedule, including the names of vendors, days and times of deliveries, and drivers' names.
3. Organise freezer and refrigeration space, loading docks, and store rooms before deliveries.
4. Gather product specification lists and purchase orders, temperature logs, calibrated thermometers, pens, flashlights, and clean loading carts before deliveries.
5. Keep receiving area clean and well lighted.
6. Do not touch ready-to-eat fruits and vegetables with bare hands.
7. Compare delivery invoice against products ordered and products delivered.
8. Transfer fruits and vegetables to their appropriate locations as quickly as possible.

E. Preventing Cross-Contamination during Storage and Preparation

1. Wash hands properly.
2. Avoid touching ready-to-eat fruits and vegetables with bare hands.
3. Separate raw animal foods, such as eggs, fish, meat, and poultry, from ready-to-eat foods, such as lettuce, cut melons, and lunch meats during receiving, storage, and preparation.
4. Separate unwashed fruits and vegetables from washed fruits and vegetables and other ready-to-eat foods.
5. Use only dry, cleaned, and sanitised equipment and utensils.
6. Touch with bare hands only those surfaces of equipment and utensils that will not come in

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direct contact with fruits and vegetables.

7. Place fruits and vegetables in covered containers or packages, except during cooling, and store in the walk-in refrigerator or cooler.
8. Designate an upper shelf of a refrigerator or walk-in cooler as the “cooling” shelf. Uncover containers of fruits and vegetables during the initial quick cool-down phase to facilitate cooling, and then cover for storage.

F. Transporting Fruits and Vegetables to Remote Sites (Satellite Kitchens)

To prevent food borne illness by ensuring that food temperatures are maintained during transportation and contamination is prevented.

1. Keep perishable fruits and vegetables refrigerated during transportation.
2. Maintain the temperature of refrigerated, potentially hazardous foods at 41°F or below.
3. Use only food carriers for transporting fruits and vegetables approved by the health department.
4. Prepare the food carrier before use:
 - a) Ensure that all surfaces of the food carrier are clean
 - b) Wash, rinse, and sanitise the interior surfaces
 - c) Ensure that the food carrier is designed to maintain cold food temperatures at 41°F
 - d) Pre-chill the food carrier according to the manufacturer’s recommendations
5. Store food in containers suitable for transportation. Containers should be:
 - a) Rigid and sectioned so that foods do not mix
 - b) Nonporous to avoid leakage
 - c) Easy-to-clean or disposable
 - d) Approved to hold food
6. Place food containers in food carriers and transport the food in clean vehicles, if applicable, to remote sites as quickly as possible.
7. Follow Receiving Deliveries SOP when food arrives at remote site.

G. Personal Hygiene

This procedure applies to employees who handle fresh fruits, prepare fresh fruits for drying, or package dried/processed products. This is to prevent contamination of fruits by employees and the production manager or supervisor must ensure that the following procedures are followed:

1. Train production employees on using the procedures in this SOP.
2. Follow the Employee Health Policy.
3. Report to work in good health, clean, and dressed in clean attire.
4. Change apron when it becomes soiled.
5. Hands are washed before starting work in the morning, after lunch or after using the toilet
6. Hands are washed after clearing dirty areas.
7. Hands are washed properly, frequently, and at the appropriate times.
8. Hands are washed with soap before and after eating.
9. Fingernails are (short) trimmed, filed, and maintained so that the edges are cleanable and not rough.
10. Artificial fingernails and fingernail polish are avoided.
11. No jewellery worn on fingers (including wedding ring) or wristband.
12. No long or hanging earrings worn to work.
13. Cuts, wounds and sores are treated and bandaged immediately. When hands are bandaged, single-use disposable gloves must be worn.
14. Eating, drinking, or chewing gum only during break-time in designated areas where food or food contact surfaces may not become contaminated.

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15. No smoking anywhere on the premises.
16. Wearing of suitable and effective hair cover/net while in the production, drying and packaging areas.

H. Managing Visitors

1. All visitors should be wearing masks to gain access/entry to the vegetable garden and fruit farm.
2. All visitors to get screened for COVID-19 (body temperature, flue-like symptoms, coughing) before entry into the farm.
3. All visitors to cough with a flexed elbow and sneeze in a paper towel or handkerchief.
4. Visitors to desist from hugging and handshaking.

I. COVID-19 Guidance for the Fruits and Vegetable Sector Workforce

The following tips can help reduce the risk of exposure to COVID-19:

1. Encourage workers to stay home if they are sick.
2. Establish flexible work hours, e.g. staggered shifts, if feasible.
3. Practice sensible social distancing and maintain 2 m between co-workers, where possible.
4. For work activities where social distancing is a challenge, consider limiting the duration of these activities and/or implementing innovative approaches, such as temporarily moving or repositioning workstations to create more distance or installing barriers-e.g. boards, glass, cloths, shields) between workstations.
5. Monitor public health communications about COVID-19 recommendations for the workplace and ensure that workers have access to and understand that information.
6. Workers should be trained on how to properly put on, use/wear, take-off, and maintain protective clothing and equipment.
7. Allow workers to wear masks over their nose and mouth to prevent spread of the virus.
8. Encourage respiratory etiquette, including covering coughs and sneezes.
9. Discourage workers from using other workers' tools and equipment.
10. Promote personal hygiene. If workers do not have access to soap and water for handwashing, provide alcohol-based hand rubs containing at least 60-70% alcohol.
11. Provide disinfectants and disposable towels workers can use to clean work surfaces.
12. Encourage workers to report any safety and health concerns especially relating to COVID-19.
13. While being screened for COVID-19 symptoms, all staff must observe social distancing of 2 m as they queue up.
14. All workers handling packaging boxes for fruits and vegetables must first wash their hands before wearing gloves, then wear disposable gloves afterwards.
15. Ensure employees should enter the uniform area with clean hands.
16. Touching non-selected uniform clothing and hangars should be kept to a minimum.

J. Social Distancing

1. Social distance should be observed by all farm workers when working.
2. Social distance when customers/visitors are paying for fruits and vegetables.
3. Social distance should be observed when being screened, sanitizing and washing hands.
4. Social distancing should be adhered to by workers at the cafeterias during lunch and also at tables that have built-in seating.
5. Maintain at least a 2 m distance whenever possible.
6. Strategies in place to ensure social distancing during breaks.
7. Staggered break times to avoid large groups of employees at once.
8. Additional rooms designated for break areas or pitch tents outside whenever possible.
9. Break and meeting/boardroom seating are reset to promote physical distancing.

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10. Limit chairs per table.
11. If possible, limit contact with high-touch surfaces-e.g., keep doors open to allow movement.

K. Personal Protective Equipment (PPE)

Train all workers on proper use of PPE. Individuals working in park sheds must wear PPE, potentially more than they are typically included in their standard operating schedule.

1. Masks (Required)

1. Workers should wear protective masks (disposable or multi-use appropriately cleaned and sanitised between uses) provided by the department, or a personal cloth mask.
2. The use of one mask per worker per day is recommended. If masks must be re-used due to shortages, wash them in a detergent paste or liquid.

2. Gloves (Required)

1. Plastic gloves (or other types of disposable glove provided by your department) should be worn.
2. Avoid touching the face (or mask) with gloved hands.
3. Wash and dry hands before putting fresh gloves on.
4. Provide necessary PPE such as nitrile gloves for working and milking, disposable hearing protection, and prepare a boot wash station so workers can clean their boots when coming and going. Clean and disinfect handwashing stations and make sure soap dispensers are full.
5. Measures to distribute daily cycled PPE to avoid unnecessary touching by multiple workers.
6. Provide adequate PPE to all employees.
7. PPE should be worn correctly by all employees.
8. Emphasise proper hand hygiene after gloves or facial coverings are removed.
9. Checklist/instructions posted for donning/doffing PPE in multiple languages.

L. Managing a COVID-19 positive case

1. In line with the Ministry of Health Public Health guidelines, the plant and offices should be thoroughly cleaned and disinfected and shall only be re-opened for business once declared safe for members of staff and the general public.
2. Develop SOPs that detail actions to be taken if an employee or visitor is tested for COVID-19 and/or tests positive for COVID-19 or is exposed to an individual positive for COVID-19.

This should include:

- a) Initiate process to contact relevant third parties who may have been exposed
- b) Clean and disinfect surfaces to limit employee exposure
- c) Work with local authorities to take appropriate steps
- d) Develop a return to work policy in coordination with local public health to department
- e) Identify workplace coordinators for COVID-19 issues and their workplace impact
- f) Coordinators should be known and accessible to all
- g) Coordinators should serve as the main source of information and primary person(s) to answer questions related to COVID-19 (e.g., Occupational Health, Plant Safety Manager)
- h) Engage plant safety/ergonomics teams and supervisors in strategy development and implementation

* These SOPs were developed in the midst of a fast-changing environment of the COVID-19 pandemic. These SOPs should, therefore, be used as a resource that can be improved, expanded, tailored or otherwise amended to suit specific business needs. The SOPs in this document reflect our best knowledge at the time of writing and will be continually updated to incorporate new learnings as they surface.

- i) Provide frontline supervisors additional training on COVID-19 and PPE so they can provide effective and reliable communications to workers and monitor for protective measures and PPE compliance
- j) Develop plans to operate with a reduced workforce
- k) Cross-train workers to perform essential functions to maintain operations

INTERNAL AND EXTERNAL REFERENCES

Internal References

1. Westerly Breeze Farm-Apollo area Mungwi Road-Lusaka West
2. Mayo Agro services-Makeni-Konga area
3. Amiran Zambia

External References

1. <https://extension.umn.edu/news/covid19-produce-farm>
2. <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/>

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C. SOP for COVID-19 mitigation measures in the Pork Industry

Department: _____

SOP No: _____

SOP Title: _____

SOP Number _____

SOP Title _____

	NAME	TITLE	SIGNATURE	DATE
Author				
Reviewer				
Authoriser				

READ BY				
	NAME	TITLE	SIGNATURE	DATE

PURPOSE

This standard operating procedure describes the suggested process to prevent the spread of COVID-19 in the production and processing of pig products in compliance with FAO, WHO, CDC guidelines and Ministry of Health COVID-19 protocols in the pig sector.

SCOPE

These SOPs apply to the pig sector specifically in the production and processing of pig products to stop the spread of COVID-19 using the WHO, CDC and ministry of Health guidelines for the prevention of COVID-19.

INTRODUCTION

COVID-19, caused by the virus SARS-CoV-2, is currently causing drastic consequences in Zambia and across the globe and is now classified as a pandemic. Pig producers, not surprisingly, have a number of concerns relating to the protection of health, animal welfare and implications of the current COVID-19 pandemic on the operation of their unit.

To protect oneself, such as when visiting live animal markets or production sites, one is advised to avoid direct contact with animals and surfaces in contact with animals. During pig production and processing, ensure good food safety practices at all times. The World Health Organisation advises handling raw meat, milk or animal organs with care to avoid contamination of uncooked foods and avoid consuming raw or undercooked animal products. These SOPs have been adapted from the WHO and COVID-19 prevention measures have been embedded into these SOPs to prevent the spread of the COVID-19 pandemic.

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DEFINITIONS

Social distancing	Also called “physical distancing,” means keeping a safe space between yourself and other people who are not from your household.
Handwashing	Also known as <i>hand</i> hygiene, is the act of <i>cleaning</i> one's <i>hands</i> with <i>soap</i> (or equivalent materials) and water to remove viruses/bacteria/germs/microorganisms, dirt, grease, or other harmful and unwanted substances stuck to the <i>hands</i> .
Personal Protective Equipment	Equipment that will protect the user against health or safety risks at work. It can include items such as safety helmets, gloves, eye protection, high-visibility clothing, safety footwear and safety harnesses. It also includes respiratory protective equipment (RPE).

RESPONSIBILITIES

A. Farm Manager-Pig Production

1. Ensure that only a limited controlled number of farm workers have access to the pig pens.
2. Ensure limited access to the piggery, and all farm workers are screened; temperature checked, COVID-19 symptoms checked before allowing entry to the piggery.
3. Ensure that PPE are available at the farm (face masks, disposable gloves, face shields, overalls, gum boots, apron etc.).
4. Ensure only essential farm workers are allowed to work in piggeries.
5. Ensure biosecurity measures are in place and are followed by all workers and visitors.
6. Create spacious parking lots, separately for vehicles delivering pig feed and for customers while separate entry and exit points for one-way controlled movement under the SOPs. The farm manager will ensure controlled entry to the pig farm and the parking area will be marked as such to ensure that vehicles are parked at a safe distance from each other while no vehicle will be allowed to enter unless the space is available.
7. Ensure that the delivery and pick up areas have hand-hygiene stands (handwashing with soap or alcohol-based hand sanitiser) at entry point and multiple other places within the farm.
8. Work with farm security to ensure that no person is allowed to enter the farm or piggery without a mask.
9. Ensure that the farm or piggery premises have functional toilets and a handwashing facility with essentially required supplies including soap, tissues and paper towels.
10. Ensure high-touch surfaces like piggery gates, store room door handles, bucket used for feeding pigs are cleaned with detergent and disinfected with 0.1% hypochlorite solution frequently.
11. Ensure proper waste collection and disposal of pig carcass arrangements are made.
12. Ensure routine testing becomes more readily available to all the workers to rapidly identify and address COVID-19 at the farm.
13. Ensure awareness of COVID-19 by all employees and its impact on pig production and processing.

B. Operations Manager-Pig Processing

1. Educate all workers on how to prevent COVID-19 infections and the spread of the disease.
2. Ensure availability of PPE for all workers.
3. Ensure availability of thermal scanning or thermometers are available at the plant for screening of all staff and visitors.
4. Ensure only essential workers report for work.
5. Ensure all workers and visitors to the beef processing plant are screened at entry point(s).

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6. Keep employees informed of all new developments on the disease. Brief them on the need for infection control measures and the preventive procedures that have been set in place.
7. Ensure all employees are aware of the Coronavirus Emergency help; COVID-19 HOTLINE Toll-Free: 909, Mobile +260 97 4493553 or Mobile +260 96 4638726.
8. Ensure that a record of all employees present at a given date and time are kept for contact tracing by supervisors and managers in various departments.
9. Be alert and able to execute emergency procedures for any worker who becomes asymptomatic of COVID-19 while at work.

SPECIFIC PROCEDURE

1. Farm gates and piggery entry should have handwashing stands with soap and clean water.
2. Every person entering a piggery/farm or plant should be screened and have their temperature checked and if above 37°C should not be allowed entry. Thermal scanning of the all staff and visitors by trained personnel should be ensured at all entry points.
3. Staff/visitors with fever or respiratory symptoms should not be allowed entry to the farm or processing plant.
4. Social distance inside the farm/plant should be maintain so that close gatherings of farms/staff could be avoided during the feeding or inspection of animals.
5. All workers should wash their hands before wearing disposable gloves as they touch the pigs and meat.
6. Before documenting at the farm or plant, writing pens should be wiped with hand sanitisers.
7. No handshaking or hugging is allowed with anyone while gathering of more than 5 persons at one place within farm/plant should not be allowed.
8. Tools used to clean the pig pens such as hard brooms, shovels etc. should not be used interchangeably with between pig pens.
9. In plant processing set-ups, weekly medical camps or clinics, with adequate staffing of trained personnel, equipment and PPE can be established at the processing plant or farm by the relevant District Health Authority. Any person detected with a high temperature should be referred to medical personal for further assessment. Staff and visitors suffering from coughs should be immediately separated and referred for further assessment.
10. In a plant set up on production lines, if fans are used in the pig processing plant or butchery facility, ensure fans blow clean air toward workers' breathing zone.
11. Let all employees accessing the other plant processing office for packaging materials sanitise their hands before touching door handles or office equipment.
12. Ensure that at delivery of feed or chemicals used in meat processing companies, a maximum of 2 people per vehicle/car will be allowed and elderly people and children may not be allowed to enter the processing plant or farm.
13. All workers are advised not to share face masks or face covering with anyone and must avoid touching the insides of a mask/face covering but use new face mask immediately if the mask is stained or becomes wet.
14. Hand sanitiser use should be highly recommended after exchange of documents or cash.
15. Pre- and post-clean the slaughter area and dispose of all carcasses following recommended procedures. All utensils used must be cleaned and sundried if possible after use.

A. Transport of raw materials, feed and animals

1. The aim is for the transporter to create a tight confinement area to eliminate any contact with the factory, farm or slaughterhouse personnel.
2. Establish specific truck entry and exit routes at the factory, farm and slaughterhouse (including washing and disinfection centers).

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3. No contact of the transporter with other workers (factory, farmers, etc.).
4. Use telematic methods for instructions and orders.
5. Have receptacles or mailboxes in which to provide and collect documentation: delivery notes, guides.
6. Carriers: complete journey without stops, especially avoiding stops in at-risk areas.

B. Slaughterhouse

Although it is not a specific issue and it should be the slaughterhouse who establishes its protocols against COVID-19, from the farm's standpoint it is necessary:

1. To know the animal "retention" capacity, respecting animal welfare if the slaughterhouse of destination has to reduce slaughter and extend slaughter times.
2. Locate other options for where the animals can be moved.

C. Pig Processing Facility COVID-19 Checklist

This document outlines a draft checklist for COVID-19 risk mitigation strategies for pig processing plants. Recommended measures to be implemented are based on the hierarchy of controls, a hazard mitigation framework that outlines controls in decreasing order of effectiveness based on the Global Centre for Health Security.

1. Where feasible place a physical barrier between workers on the production line and identify opportunities to place physical barriers e.g., boards, cloth material or plastic sheeting in hallways to guide employee traffic to/from production and limit crossover.
2. Social distancing should be adhered to by workers at the cafeteria's lunch tables including for tables with built-in seating.

D. Administrative Controls

Administrative control measures available for COVID-19 include policies, procedures, training, and workplace practices. Ineffective policies or practices or inconsistent compliance may heighten exposure to risks.

1. Universal Mask Policy – This Policy should be put in place for all employees and essential visitors to wear face masks at all times while in the beef processing facility.
2. Provide employees with information on proper PPE use such as face mask use.

E. Communication/Education

1. Provide easy to understand information (e.g., posters, infographics) that can be translated into the multiple languages spoken by workers. Post multilingual signage throughout the facility directing risk-minimizing behaviour for employees such as:
 - a) Handwashing procedures
 - b) Recognizing COVID-19 symptoms and how to stop the spread
 - c) Screening process/requirements
 - d) Resources on social distancing outside of the workplace (e.g., in homes, car sharing or pooling)
 - e) Proper hand hygiene and glove practices and refraining from touching their face
 - f) General guidance for worker protection at home and in the community
 - g) Information on self-monitoring of COVID-19 symptoms
 - h) Information on safe social distancing practices

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2. Provide information to employees on basic protective measures against COVID-19 such as:
 - a) Handwashing procedures
 - b) Staying home when sick
 - c) Avoiding contact with people who are sick
 - d) Following guidance of local and state public health officials on staying home and avoiding unnecessary trips outside of the home
 - e) Engaging local community leaders (e.g., church leaders, chiefs) to help educate and relay COVID-19 message to community members
 - f) Encouraging workers to wear cloth masks when using public transport to work (if car sharing) and to protect others when waiting to be screened prior to them receiving a new mask for their shift
 - g) Encouraging workers to minimise car sharing as they travel to work
 - h) Limit the number of people per vehicle and space out when using company vehicles

F. Enhanced cleaning and disinfection of common contact areas

1. Identify common high-touch surfaces (e.g. tables, door handles) and develop a checklist to ensure frequent sanitization throughout the day.
2. Hand sanitiser dispensers should be available throughout the facility, particularly at entrance, exits, and transition areas.
3. Assess supply of cleaning supplies, sanitisers, and disinfectants and encourage their practical use.
4. Ensure sanitizing wipes and soap are readily available in lunch and break rooms.
5. Identify common shared tools and develop procedures to sanitise between users.
6. Implement a process for routine deep cleaning of common areas, either daily/nightly or, at minimum, weekly.
7. Use no-touch containers when possible.

G. Active Screening

1. Designate a single point of entry for all plant processing staff and visitors.
2. Develop and implement screening questions conducted daily screening of all individuals entering the facility.
3. Ensure employees undergo daily temperature screening prior to entering the facility.
4. Ensure screener is trained to administer the temperature checks.
5. Ensure screener has adequate PPE and, as applicable, maintains social distancing as testing is performed.
6. Ensure secondary screening, if offered, is conducted by staff with medical training.
7. Ensure proper validation of infrared temperature tool prior to use.

H. Social Distancing

1. Limit visitors except for required essential services.
2. Maintain at least a 2 m distance whenever possible.
3. Put strategies in place to ensure social distancing during breaks.
4. Stagger breaktimes to avoid large groups of employees at once.
5. Designate additional rooms for break areas or pitch tents outside.
6. Reset break and meeting room seating to promote physical distancing.
7. Limit chairs per table.
8. Use tape on floors, if necessary, to designate spots at least 1 m apart.
9. Ensure cleaning of tables between use (by self-cleaning or e.g., Cargill example of laminated card flipped to red when employee finishes eating lunch to inform cleaning

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worker table is in need of cleaning; once cleaner cleans, flips to green side indicating table ready for use).

10. Maintain 1 m distancing practice if office staff required onsite.
11. Implement cohorting of work teams wherever possible. Work teams should be small and consistent, so that staff in close proximity to each other always work together, with lockers, breaks, and meals taken together. This serves to both decrease number of potential exposures for each person and to simplify identifying possible exposures if a case presents.
12. Limit crossover in entrances, corridors, and common spaces by adjusting personnel workflow.
13. Limit the number of persons in a corridor or entryway at one time.
14. Limit contact with high-touch surfaces if possible; e.g., keep doors open to allow movement of air.
15. Ensure employees enter the uniform area with clean hands.
16. Ensure touching non-selected uniform clothing and hangers is kept to a minimum.
17. Limit interactions with people outside of work.
18. Limit travel to essential locations (i.e. grocery store or pharmacy) if possible.
19. Restrict domestic or international travel during the height of the pandemic.

I. Visitors

1. Only essential visitors should be permitted on site (e.g. vets or essential maintenance personnel).
2. On arrival to the unit, all visitors should fill in a **visitor declaration form** to assess the risk, including if they are exhibiting any signs of the virus and details of recent travel. If they are deemed to be a high risk, they should not be permitted. If not high-risk they should be informed of COVID-19 control policies prior to entry.
3. It is essential that all visitors permitted to enter the premises remain at least 2 m away from all farm personnel at all times.
4. Visitors should follow the strict farm biosecurity procedures including the use of PPE (provided by the unit) prior to entry.
5. In relation to deliveries, farm personnel should not approach any of the drivers.
6. Delivery dockets should be left in an agreed location and not handed to staff.
7. Provision of hand sanitisers at the location where dockets are handled will provide added biosecurity.

J. Workforce Policies

1. Institute flexible workplace and sick leave policies and communicate these policies to all workers.
2. Institute a no-penalty approach for those taking sick leave especially if showing symptoms of COVID-19.
3. Ensure supervisors understand that they are not to penalise workers for using these benefits.
4. Recognise certain policies may incentivise employees to come to work sick (e.g., extra food at end of shift, bonus pay).

K. Managing a COVID-19 positive case on a pig farm or processing plant

1. Initiate process to contact relevant third parties who may have been exposed.
2. Clean and disinfect surfaces to limit employee exposure.
3. Work with local authorities to take appropriate steps.

** These SOPs were developed in the midst of a fast-changing environment of the COVID-19 pandemic. These SOPs should, therefore, be used as a resource that can be improved, expanded, tailored or otherwise amended to suit specific business needs. The SOPs in this document reflect our best knowledge at the time of writing and will be continually updated to incorporate new learnings as they surface.*

4. Develop a return to work policy in coordination with the local public health department.
5. Identify workplace coordinators for COVID-19 issues and their workplace impact.
6. Coordinators should be known and accessible to all.
7. Coordinators should serve as the main source of information and primary person(s) to answer questions related to COVID-19 (e.g., Occupational Health, Plant Safety Manager).
8. Engage plant safety/ergonomics teams and supervisors in strategy development and implementation.
9. Provide frontline supervisors additional training on COVID-19 and PPE so they can provide effective and reliable communications to workers and monitor for protective measures and PPE compliance.
10. Develop plans to operate with a reduced workforce.
11. Cross-train workers to perform essential functions to maintain operations.
12. Develop a testing strategy in coordination with local public health officials.
13. Work with local and state public health officials to conduct testing of priority cases.

Personal Protective Equipment (PPE)

Train all workers on proper use of Personal Protective Equipment:

1. Implement measures to distribute daily cycled PPE to avoid unnecessary touching by multiple workers
2. Provide adequate PPE to all pig production employees
3. Ensure PPE is worn correctly by all employees
4. Emphasise proper hand hygiene after gloves or facial coverings are removed
5. Post checklist/instructions for donning/doffing PPE in multiple languages
6. Implement biosecurity measures

INTERNAL AND EXTERNAL REFERENCES

1. Westerly Breeze Farm-Apollo area Mungwi Road-Lusaka West
2. Zambeef
3. <https://www.iowapork.org/producer-resources/resources-and-information/covid-19/>
4. <https://www.unmc.edu/healthsecurity/education/programs/docs/Checklist.pdf>
5. <https://www.pig333.com/articles/covid-19-and-pig-viruses-%E2%80%93-what-can-we-learn-15938/>
6. <https://www.swineweb.com/how-is-covid-19-impacting-minnesotas-pork-industry/>

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D. SOP for COVID-19 mitigation measures in Dairy

Department: _____

SOP No: _____

SOP Title: _____

SOP Number: _____

SOP Title: _____

	NAME	TITLE	SIGNATURE	DATE
Author				
Reviewer				
Authoriser				

Read By				
	NAME	TITLE	SIGNATURE	DATE

PURPOSE

This standard operating procedure describes the suggested process to prevent the spread of the coronavirus or COVID-19 disease in the production and processing of dairy products in compliance with FAO, WHO, and CDC guidelines and Ministry of Health COVID-19 protocols in the dairy sector industry.

SCOPE

These SOPs apply to the dairy sector specifically the production and processing of dairy products to stop the spread of COVID-19 using the WHO, CDC and MoH guidelines on prevention of COVID-19.

INTRODUCTION

COVID-19 is a respiratory disease spread through human-to-human transmission via droplets. Many other viruses in the coronavirus family find their origin in animals. The COVID-19 virus (also called SARS-CoV-2) is a new virus in humans. The possible animal source of COVID-19 has not yet been confirmed but research is ongoing.

To protect oneself, such as when visiting live animal markets or production sites, one is advised to avoid direct contact with animals and surfaces in contact with animals. During dairy production and processing ensure good food safety practices at all times. WHO advises handling raw meat, milk or animal organs with care to avoid contamination of uncooked foods and avoid consuming raw or undercooked animal products. These SOPs have been adapted from the WHO, University of Maine-Cooperative Extension Publication, CDC and COVID-19 prevention measures have been embedded into these SOPs to prevent the spread of the COVID-19 pandemic.

** These SOPs were developed in the midst of a fast-changing environment of the COVID-19 pandemic. These SOPs should, therefore, be used as a resource that can be improved, expanded, tailored or otherwise amended to suit specific business needs. The SOPs in this document reflect our best knowledge at the time of writing and will be continually updated to incorporate new learnings as they surface.*

RESPONSIBILITIES

A. Operations Manager

1. Ensure pre- and post-cleaning of all utensils used in milk and dairy products productions and processing.
2. Ensure that only a limited controlled number of suppliers of milk to the milk processing company should be allowed to deliver milk at a given time and at a designated place to maintain social distancing.
3. Ensure that at delivery of milk to processing companies, a maximum of 2 people per vehicle/car will be allowed and elderly people and children are not allowed to enter the open market.
4. Spacious parking lots should be created separately for vehicles carrying milk and for customers, while separate entry and exit points are created for one-way controlled movement under the SOPs. The security personnel should ensure controlled entry to the milk plant and the parking area will be marked as such to ensure that vehicles are parked at a safe distance from each other while no vehicle will be allowed to enter unless the space is available.
5. Ensure that the delivery area has hand-hygiene facilities (handwashing with soap or alcohol-based hand sanitiser) at entry point and multiple other places within the farm or processing plant.
6. The operations manager ensures that no person should be allowed to enter the farm or processing plant without a face mask.
7. Every person entering a reception, or milk processing plant area should be screened and have their temperature checked and if above 37°C should not be allowed entry.
8. Ensure that all dairy workers/staff are advised not to share face masks or face coverings with anyone and must avoid touching the insides of a mask/face covering but use new face mask immediately if the mask is soiled or becomes wet.
9. Ensure that plant premises should have functional toilets and a handwashing facility with essentially required supplies including soap, tissues and paper towels.
10. Hand sanitiser use has been highly recommended after exchange of delivery notes, receipts, invoices, currency bills and touching shared surfaces within the market.
11. Ensure high-touch surfaces like operating milk machines are cleaned with detergent and disinfected with 0.1% hypochlorite solution frequently.
12. Ensure proper waste collection and disposal of bad dairy products.
13. Thermal scanning of the all staff and visitors by trained personnel should be ensured at all entry points.

B. Occupational Safety and Health Manager

1. Ensure awareness of COVID-19 by all employees and its impact on milk, cheese, and yoghurt production and processing.
2. Ensure testing becomes more readily available to all the workers especially essential workers to rapidly identify and address COVID-19 on a dairy farm or processing plant.
3. Educate all workers on how to prevent COVID-19 infections and spread of the disease.
4. Ensure all workers' and visitors' details are kept at the plant for contact tracing.
5. Ensure employees are informed of all new developments on the disease. Brief them on the need for infection control measures and the preventive procedures that have been set in place.
6. Ensure all employees are aware of the Coronavirus Emergency help; COVID-19 HOTLINE Toll-Free: 909, Mobile +260 97 4493553 or Mobile +260 96 4638726.
7. Be the contact and liaison person for all Ministry of Health-related updates.
8. Be alert and able to execute emergency procedures for any worker who becomes asymptomatic of COVID-19 while at work.

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C. Human Resource Manager

1. Ensure only essential workers report for work; production, transport, security personnel among others.
2. Ensure proper and timely communication on COVID-19 updates to all employees.
3. Ensure employees are apprised of their rights and the tools that are provided to support them.
4. Review the sick policy; be sure it is up-to-date, and give all employees the most recent version.
5. Implement measures that reduce the risk of workplace transmission. These risk reduction steps should include:
 - a) Regularly sanitise all tools and surfaces.
 - b) Increase access to hand sanitiser and handwashing stations.
 - c) Create workstations that are at least 1 m apart.
 - d) Rotate shifts to decrease the number of employees in proximity of each other.

SPECIFIC PROCEDURE

1. All dairy production staff should be screened before gaining entry to the milk processing plant. The screen should include a handheld thermal scanner or thermometer.
2. All visitors, suppliers and contractors must first be screened for COVID-19 and only those without symptoms must be allowed entry to the company premises and not the processing plant area.
3. While being screened for COVID-19 symptoms, all dairy workers must observe social distancing as they queue up.
4. All milk production workers milking cows manually must first wash their hands before wearing gloves, then wear disposable gloves.
5. Disposable gloves should be used while touching the dairy cows. All used gloves and other disposable items must be placed in a bag that can be tied airtight before disposing of them with other waste. Wash hands with soap and water for at least 20 seconds immediately after removing gloves or use an alcohol-based hand sanitiser containing at least 60% alcohol if soap and water are not available. Soap and water should be used if hands are visibly soiled. Management, staff, drivers, security personnel and visitors should not share personal items like writing pens, and food and utensils. Where pens are used for signing and documenting, they should be wiped with hand sanitisers
6. Workers should not be allowed to shake hands or hug with anyone while gatherings of more than 5 workers at one place within a farm processing plant should not be allowed.
7. If possible, set up weekly medical camps or clinics, with adequate staffing of trained personnel from government clinics. Equipment and PPE can be established at the milk processing plant or farm by the concerned District Health Authority. Any person detected with a high temperature will be referred to medical camps for further assessment. Staff and visitors suffering from coughing should be immediately separated and referred for further assessment.
8. On production lines, if fans are used in the dairy processing plant, ensure fans blow clean air toward workers' breathing zone.
9. Let all employees accessing the other plant processing office for packaging materials sanitise their hands before touching door handles or office equipment.
10. Biosecurity measures must be implemented. All delivery truck/vehicles delivering feed for dairy must be disinfected or made to drive through footbaths containing recommended disinfectants.
11. Provide a mechanism for all surfaces to be disinfected before a new person arrives to take over the operation. These include:
 - a) All door handles and switches;
 - b) All milking machines, tools, switches, and bulk tank controls;

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- c) Tractor steering wheels, controls, levers;
- d) All tool handles and implements;
- e) Bucket handles, calf bottles, etc.; and
- f) Hoses and other necessary pieces of equipment.

Dairy Processing Facility COVID-19 Checklist

A. Administrative Controls

Administrative control measures available for COVID-19 include policies, procedures, training, and workplace practices. Ineffective policies or practices or inconsistent compliance may heighten exposure risks.

1. Universal Mask Policy – This Policy should be put in place for all employees and essential visitors to wear face masks at all times while in the milk processing facility.
2. Provide employees with information on proper PPE use such as face mask use.

B. Communication/Education

1. Provide easy to understand information (e.g., posters, infographics) that can be translated into the multiple languages spoken by workers. Post multilingual signage throughout facility directing risk-minimizing behaviour for employees such as:
 - a) Handwashing procedures
 - b) COVID-19 symptoms and how to stop the spread
 - c) Screening process/requirements
 - d) Provide resources to employees on social distancing outside of workplace (e.g., in homes and while car sharing cars)
 - e) Refresh staff on proper hand hygiene and glove practices and refraining from touching their face
 - f) General guidance for worker protection at home and in the community
 - g) Provide information to employees on self-monitoring of COVID-19 symptoms
 - h) Provide information to employees on safe social distancing practices
2. Provide information to employees on basic protective measures against COVID-19 such as:
 - a) Handwashing procedures
 - b) Staying home when sick
 - c) Avoiding contact with people who are sick
 - d) Following guidance of local and state public health officials on staying home and avoiding unnecessary trips outside of the home
 - e) Engage local community leaders (e.g., church leaders, chiefs) to help educate and relay COVID-19 message to community members
 - f) Encourage workers to wear cloth masks when using public transport to work (if car sharing) and to protect others when waiting to be screened prior to them receiving a new mask for their shift
 - g) Encourage workers to minimise car sharing as they drive to work, when possible
 - h) Limit the number of people per vehicle and space out when using company vehicles

C. Enhanced cleaning and disinfection of common contact areas

1. Wash milking equipment after milking.
2. Ensure bulk tank cleaning after milk pick-up.

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3. Identify common high-touch surfaces (e.g., tables, door handles) and develop a checklist to ensure frequent sanitization throughout the day.
4. Hand sanitiser dispensers should be available throughout the facility, particularly at entrance, exits, and transition areas.
5. Assess supply of cleaning supplies, sanitisers, and disinfectants and encourage their practical use.
6. Sanitizing wipes and soap readily available in lunch and breakrooms.
7. Identify common shared tools and develop procedures to sanitise between users.
8. Implement a process for routine deep cleaning of common areas, either daily/nightly or, at minimum, weekly.
9. Use no-touch containers when possible.

D. Active Screening

1. Designate a single point of entry for all plant processing staff and visitors.
2. Develop and implement screening questions conducted daily for all individuals entering the facility.
3. Ensure employees undergo daily temperature screening prior to entering the facility.
4. Ensure screener is trained to administer the temperature checks.
5. Ensure screener has adequate PPE and, as applicable, maintains social distancing as testing is performed.
6. Ensure secondary screening, if offered, is conducted by staff with medical training.
7. Ensure the infrared temperature tool is properly validated prior to use.

E. Social Distancing

1. Limit visitors except for required essential services.
2. Maintain at least a 2 m distance whenever possible.
3. Implement strategies to ensure social distancing during breaks.
4. Stagger break times to avoid large groups of employees at once.
5. Designate additional rooms for break areas or pitch tents outside.
6. Reset break and meeting room seating to promote physical distancing.
7. Limit chairs per table.
8. Use tape on floors, if necessary, to designate spots 2 m apart.
9. Ensure cleaning of tables between use.
10. Introduce a system such as card flipped to red when employee finishes eating lunch to inform cleaner that the table is in need of cleaning; once cleaner cleans, flips to green side indicating table ready for use).
11. Maintain a 2 m distancing practice for office staff required onsite.
12. Implement cohorting of work teams wherever possible. Work teams should be small and consistent, so that staff in close proximity to each other always work together, with lockers, breaks, and meals taken together. This serves to both decrease the number of potential exposures for each person and to simplify identifying possible exposures if a case presents.
13. Limit crossover in entrances, corridors, and common spaces by adjusting personnel workflow.
14. Limit the number of persons in a corridor or entryway at any one time.
15. Limit contact with high-touch surfaces if possible; e.g., keep doors open to allow movement.
16. Promote unidirectional flow through locker areas and when entering/exiting production floor.

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17. Employees should enter the uniform area with clean hands.
18. Touching non-selected uniform clothing and hangars should be kept to a minimum.

F. Workforce Policies

1. Institute flexible workplace and sick leave policies and communicate these policies to all workers.
2. Institute a no-penalty approach for those taking sick leave especially if showing symptoms of COVID-19.
3. Ensure supervisors understand that they are not to penalise workers for using these benefits.
4. Recognise certain policies may incentivise employees to come to work sick (e.g., extra food at end of shift, bonus pay).

G. Managing a COVID-19 positive case

1. Implement process to contact relevant third parties who may have been exposed.
2. Clean and disinfect surfaces to limit employee exposure.
3. Work with local authorities to take appropriate steps.
4. Develop a return to work policy in coordination with local public health to department.
5. Identify workplace coordinators for COVID-19 issues and their workplace impact.
6. Coordinators should be known and accessible to all.
7. Coordinators should serve as the main source of information and primary person(s) to answer questions related to COVID-19 (e.g., Occupational Health, Plant Safety Manager).
8. Engage plant safety/ergonomics teams and supervisors in strategy development and implementation.
9. Provide frontline supervisors additional training on COVID-19 and PPE so they can provide effective and reliable communications to workers and monitor for protective measures and PPE compliance.
10. Develop plans to operate with a reduced workforce.
11. Cross-train workers to perform essential functions to maintain operations.
12. Develop a testing strategy in coordination with local public health officials.
13. Work with local and state public health officials to conduct testing of priority cases.

H. Personal Protective Equipment (PPE)

Train all workers on proper use of Personal Protective Equipment:

1. Provide necessary personal protective equipment (PPE), such as nitrile gloves for working and milking, disposable hearing protection, and prepare a bootwashing station so workers can clean their boots when coming and going. Clean and disinfect handwashing stations and make sure soap dispensers are full.
2. Introduce measures to distribute daily cycled PPE to avoid unnecessary touching by multiple workers.
3. Provide adequate PPE provided to all beef production workers employees.
4. Ensure PPE is worn correctly by all employees.
5. Emphasise proper hand hygiene after gloves or facial coverings are removed.
6. Post checklist/instructions donning/doffing PPE in multiple languages
7. Implement biosecurity measures.

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INTERNAL AND EXTERNAL REFERENCES

1. Seven Rivers Farm-Off Lusaka Road-Livingstone
2. Westerly Breeze Farm-Apollo area Mungwi Road-Lusaka West
3. Zambeef
4. Dairy Association of Zambia-DAZ
5. <https://extension.umaine.edu/publications/1066e/>
6. <https://extension.umaine.edu/publications/1067e/>
7. <https://www.unmc.edu/healthsecurity/education/programs/docs/Checklist.pdf>
8. <https://www.legalfoodhub.org/wp-content/uploads/2020/04/COVID19-Maine-Farm-and-Food-Safety.pdf>

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E. SOP for COVID-19 mitigation measures in the Fishing Industry

Department: _____

SOP No: _____

SOP Title: _____

SOP Number: _____

SOP Title: _____

	NAME	TITLE	SIGNATURE	DATE
Author				
Reviewer				
Authoriser				

Read By				
	NAME	TITLE	SIGNATURE	DATE

PURPOSE

This standard operating procedure describes the suggested process to prevent the spread of coronavirus or COVID-19 disease in the growing, producing and processing of fish and fish fingerlings in compliance with FAO, WHO, CDC guidelines and Ministry of Health COVID-19 protocols in the agro processing sector industry.

SCOPE

These SOPs apply to the aquaculture sector specifically in the farming, production and processing of fish and fingerlings to stop the spread of COVID-19 using the WHO, CDC and MoH guidelines on prevention of COVID-19.

INTRODUCTION

COVID-19 is a respiratory disease spread through human-to-human transmission via droplets. Many other viruses in the coronavirus family find their origin in animals. The COVID-19 virus (also called SARS-CoV-2) is a new virus in humans. The possible animal source of COVID-19 has not yet been confirmed but research is ongoing.

To protect oneself, such as when visiting fish farms, ponds, dams, rivers, lakes or production sites one is advised to avoid direct contact with fish and surfaces in contact with animals. During fish production and processing, ensure good food safety practices at all times. The World Health Organization advises handling raw fish, milk or animal organs with care to avoid contamination of uncooked foods and avoid consuming raw or undercooked animal products. These SOPs have been adapted from the WHO and COVID-19 prevention measures have been embedded to these SOPs to prevent the spread of COVID-19 pandemic.

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These SOPs have been adapted from the Ministry of Health and Family Welfare, and Ministry of Home Affairs, Government of India (www.dof.gov.in).

DEFINITIONS

Fish fingerlings	Development stage of fish following the fry stage and continuing into the first three to four months of life.
Yearling	Development stage of fish following the fingerling stage and lasting until approximately one year of age
Aquaculture	also known as aquafarming, it is the controlled growth of aquatic species.
Fish farm	Locations used to grow populations of aquatic organisms, primarily fish.
Fish hatchery	One form of a fish farm, managed with the intent of resupplying native wild populations in natural environments.
Wild fishing harvest	The commercial and personal fishing consumption in a specific area and over a specific time frame.
Water quality	The characteristics of water, such as water temperature and contamination, which define its ability to sustain life and its purity from chemicals.
Contaminants	Both natural and artificial materials not typically found or found in unusually high concentrations which can be detrimental to the health of wild or farmed aquatic species.

RESPONSIBILITIES

A. Operations Manager

1. Ensure that at delivery of fish feed to fish producing companies, a maximum of 2 people per vehicle/car should be allowed and elderly people and children should not be allowed to enter the premises.
2. Ensure that the fish collection area has hand-hygiene facilities (handwashing with soap or alcohol-based hand sanitiser) at entry point and multiple other places within the market areas.
3. Ensures that no person should be allowed to enter fish processing area without a face mask either for sale/purchase of fish or staff involved in market management.
4. Ensure every person entering the fingerling production area is screened and has their temperature checked and if above 37°C is not allowed entry.
5. Ensure that all fish handlers are advised not to share face masks or face covering with anyone and must avoid touching the insides of a mask/face covering but use new face mask immediately if the mask is soiled or becomes wet.
6. Ensure that the plant processing premises have functional toilets and handwashing facility with essentially required supplies including anti-bacteria soap, tissues and paper towels.
7. Ensure hand sanitiser use is highly recommended after exchange of currency bills, documents, pens and touching shared surfaces within the plant or fish camp.
8. Ensure high-touch surfaces like cooler boxes, bars, table counter tops are cleaned with detergent and disinfected with 0.1% hypochlorite solution frequently.
9. Ensure thermal scanning of all staff and visitors by trained personnel at all entry points.

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B. Occupational Safety and Health Manager

1. Ensure awareness of COVID-19 by all employees and its impact on fish production and processing.
2. Ensure testing becomes more readily available to all the workers to rapidly identify and address COVID-19 in this occupational setting.
3. Educate all workers on how to prevent COVID-19 infections and spread of the disease
4. Ensure all workers and visitors to the fish ponds, hatcheries, processing plant are screened at entry point(s).
5. Keep employees informed of all new developments on the disease (COVID-19). Brief them on the need for infection control measures and the preventive procedures that have been set in place.
6. Ensure all employees are aware of the COVID-19 Emergency help; COVID-19 HOTLINE Toll-Free: 909, Mobile +260 97 4493553 or Mobile +260 96 4638726
7. Must be the contact and liaison person for all Ministry of Health-related updates
8. Ensure that a record of all employees present at a given date and time are kept for contact tracing by supervisors and managers in various departments.
9. Be alert and able to execute emergency procedures for any worker who becomes symptomatic of COVID-19 while at work.

SPECIFIC PROCEDURE

The SOPs of aquaculture/fisheries consist of 4 parts:

1. Fish production units or fish farms.
2. Fish seed production centre or hatcheries.
3. Fish production from natural water bodies such as, rivers, lakes, swamps reservoirs and wetlands.
4. Processing plants.

1. Fish Production Units or Fish Farms

- i. Only registered and licensed fish farms and hatcheries should be allowed to carry out preparatory and fish production activities like pond preparation, seed segregation, feeding, water management, pond management, sampling, and fish harvesting subject to compliance with the guidelines issued by the Ministry of Health and Zambia National Public Health Institute.
- ii. If any fish farmer/ worker/farm hands develop symptoms like cough, headache, body ache, shortness of breath, nasal congestion, runny nose and sore throat etc., he/she should immediately communicate with the Health and Safety Officer and eventually to the Public Health Department.
- iii. Management of the fish farms or ponds shall ensure arrangement of all protective gears to avoid spread of COVID-19 (sanitiser, soap etc.) for the workers/hands. The workers while entering the farm should follow the sanitary norms and should change the clothes they have used while travelling and use disinfected clothes while working inside the farm.
- iv. Social distancing and proper hygiene practices shall be maintained during the activities such as pond preparation, feeding, fish sampling, catching or harvesting. Disinfectant spraying and cleanliness will be carried out at the pond sites/farm and is to be continued as a regular practice until the situation becomes normal. Visitors shall not be permitted inside the farm until the situation becomes normal.

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- v. Adequate facilities for medical check-ups/screening of fish farmers/workers should be arranged by the local fishery offices in co-ordination with the Health Department of each district. The Medical Screening Team should also make the fish farmers and fishermen aware about the symptoms related to COVID-19 and the preventions (social distancing etc.) along with the procedures to be followed related to it.
- vi. Farm management shall declare and share the list of workers/personnel to the District Health Department for maintaining the details in the register. District Administration should also earmark designated vehicles (in consultation with fish farmer associations) exclusively for supply of farm inputs such as fingerlings, fish feed, diesel, ice etc. and collection and transportation of fish from the fish farms. Disinfection of farm and implements such as nets/equipment for each pond has to be carried out before they are put into use.
- vii. The farm owner should procure fingerlings and feed and other farm inputs from local suppliers if possible, and movement of workers should be preferably limited within the district only if possible, to avoid any possible spread of COVID-19 infection.
- viii. Fish farmers/farm workers must provide contact details of their family members/relatives and for contact tracing in case of a positive test case of COVID-19.
- ix. Fish farmers/workers shall be subjected to thermal scanning at the entrance of farm/monitoring booth and they shall be allowed to enter into the farm after the thermal scanning and disinfection of their hands.
- x. The farmers/workers should be advised that no physical contacts or exchanges of items should be made by them with workers of adjacent farms, if any.
- xi. Proper biosecurity measures like footbaths; tyre-wash/vehicle-wash, hand and leg dips should be provided in order to avoid cross-contaminations.
- xii. The fish transport vehicles should enter their proper movement details in the farm movement book and details may also be shared on a daily basis with the production manager or supervisors.
- xiii. After completion of the work all the farm implements like nets, check trays, feeding buckets, scoop cooler boxes nets, water sampling bottles should be disinfected properly and sundried.

2. Fish Seed/Fingerlings Production Units or Fish Hatchery

- i. Fish workers must wash their hands before handling fish or fish fingerlings and before picking up PPE.
- ii. Fish workers and fishermen should wear disposable gloves when handling or harvesting fish from ponds.
- iii. Physical distancing should be observed as fishermen cast their nets as they fish from rivers or constructed fish ponds.
- iv. The production department shall plan and execute the fingerlings production activities in such a manner, so as to maintain proper monitoring and social distancing.
- v. Management of the hatchery shall ensure arrangement of all protective gears to avoid spread of COVID-19 (sanitiser, soap etc.) for the workers/hands. The worker, while entering the farm, should ensure following necessary sanitary norms and should change the clothes they have used while travelling and use disinfected clothes while working inside the hatchery. If possible, every section worker should be kept in respective sections untill the situation of COVID19 improves.
- vi. Disinfectant spraying and cleanliness will be carried out at the hatchery before and after every cycle on a regular basis. Disinfection of hatchery and related implements such as buckets, bins, nets/equipment for each tank has to be carried out before they are put into use. No visitors shall be permitted inside the hatchery till the situation becomes normal.

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- vii. All the operators/workers shall be subjected to thermal scanning at the entrance of the hatchery/monitoring booth and shall be allowed to enter into the hatchery after the scanning.

3. Natural Water Bodies such as Reservoirs, Wetlands, Rivers, and Dams

- i. The fish harvesting from large water bodies like rivers, Lakes, dams, floodplains, and wetlands can be carried out by using smaller country crafts, coracles with minimum number of fishers and by using cast nets, gill nets, shoot nets or by hook and lines only.
- ii. As far as possible, community fishing should be put on hold and only marginal fishermen should be allowed to fish from the larger water bodies until the situation returns to normal. They should not be allowed to land their fish at different landing centres of the lakes or rivers.
- iii. The fishermen should be advised that no physical contacts or exchanges of items to be made between fishing crafts or coracles while fishing. The boat owners/fishermen should adhere to the guidelines issued by the Ministry of Health, to maintain a social distance and also to maintain an appropriate distance between the fishing crafts, coracles or logs.
- iv. In case any fishermen are reported sick and develop symptoms like coughing, headache, fever, body ache, shortness of breath, nasal congestion, runny nose, and sore throat etc. while fishing in large water bodies, the fishing activity should be abandoned and the fishing crafts should return back to the designated landing site immediately. They should also not consume or touch their catch while returning from fishing. Such a catch must be disposed of as per the advice of the health department and it must not be transferred from one fishing craft to others.
- v. The fishermen should maintain a social distance while on board, take all sanitary precautions and avoid contact with the fishers having symptoms. In no case should they come into contact with the symptomatic person.
- vi. The smaller crafts, coracles or logs used for fishing in these water bodies along with the nets should be disinfected before every fishing activity to prevent the spread of COVID-19.
- vii. The fishers should be screened at shore on a daily basis as far as possible as they are exposed to adverse environments. The fishers should be advised to minimise the handling of catch on-board as well as at the landing centre until the fishes are handed off to the aggregator or trader.

4. Processing Plants

- i. Social distancing should be maintained in the processing plants while processing; cleaning, scaling and packaging the fish. The workers should also adhere to preventive guidelines and social distancing as prescribed by the Ministry of Health and WHO.
- ii. All collection trays or vehicles are to be washed or sanitised on a daily basis as per the advice of the health authorities.
- iii. The processing plants should also follow the prescribed standard guidelines on food safety.
- iv. Suitable arrangements may be made by the district administration, in consultation with Fisheries Department, to facilitate exports of the processed fish.
- v. As far as possible, the minimum handling of fish has to be observed and the persons engaged in catching, harvesting, and selling of fish should adhere to proper sanitation methods as prescribed from time to time by the food safety department.
- vi. The processing activities have to be planned and executed in such a manner that if any worker develops symptoms like a cough, headache, body ache, shortness of breath, nasal congestion, runny nose and sore throat etc., they should strictly not be allowed to the plant.

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On a daily basis, the workers should be checked or screened thoroughly before they enter the plant.

- vii. The processing plant should be disinfected regularly with sodium hypochlorite solution.
- viii. People with fever or respiratory symptoms are advised not to visit the fish ponds.
- ix. Disposable gloves should be employed/used while touching the fish by staff, sellers, buyers and visitors should not share personal items like writing pens and food utensils.
- x. Wipe writing pens with hand sanitisers.
- xi. No handshaking or hugging is allowed with anyone while gatherings of more than 5 persons at one place within market premises would not be permitted.
- xii. Weekly medical camps or clinics, with adequate staffing of trained personnel, equipment and PPE can be established at the processing plant or farm by the relevant concerned District Health Authority. Any person detected with a high temperature will be referred to medical camps for further assessment. Staff and visitors suffering from a cough should be immediately separated and referred for further medical assessment.
- xiii. Employees accessing the other plant processing office for packaging materials must sanitise their hands before touching door handles or office equipment.
- xiv. Where feasible place physical barriers between workers on the production line and identify opportunities to place other physical barriers e.g., boards, cloth or plastic sheeting in hallways to guide employee traffic to/from production to limit crossover.
- xv. Social distancing should be adhered to by workers at the cafeteria's lunch tables including tables with built-in seating.

Administrative Controls

Administrative control measures available for COVID-19 include policies, procedures, training, and workplace practices. Ineffective policies or practices or inconsistent compliance may heighten exposure risks.

- I) Universal Mask Policy – This Policy should be put in place for all employees and essential visitors to wear face masks at all times while in the fish processing facility.
- II) Provide employees with information on proper PPE use such as face mask use.

Communication/Education

- 1. Provide easy-to-understand information (e.g., posters, infographics) that can be translated into the multiple languages spoken by workers. Post multilingual signage throughout the facility directing risk-minimizing behaviour for employees such as:
 - a) Handwashing procedures
 - b) COVID-19 symptoms and how to stop the spread
 - c) Screening process/requirements
 - d) Resources on social distancing outside of workplace (e.g., in homes, car sharing or pooling)
 - e) Proper hand hygiene and glove practices and refraining from touching their face
 - f) General guidance for worker protection at home and in the community
 - g) Information on self-monitoring of COVID-19 symptoms
 - h) Information on safe social distancing practices
- 2. Provide information to employees on basic protective measures against COVID-19 such as:
 - a) Handwashing procedures
 - b) Staying home when sick
 - c) Avoiding contact with people who are sick
 - d) Following guidance of local and state public health officials on staying home and avoiding unnecessary trips outside of the home

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- e) Engaging local community leaders (e.g., church leaders, chiefs) to help educate and relay COVID-19 message to community members
- f) Encouraging workers to wear cloth masks when using public transport to work (if car sharing) and to protect others when waiting to be screened prior to them receiving a new mask for their shift
- g) Encouraging workers to minimise car sharing as they travel to work, when possible
- h) Limiting the number of people per vehicle and space out when using company vehicles

Enhanced Cleaning and Disinfection of Common Contact Areas

- a) Identify common high-touch surfaces (e.g., tables, door handles) and develop a checklist to ensure frequent sanitization throughout the day
- b) Hand sanitiser dispensers should be available throughout the facility, particularly at entrance, exits, and transition areas
- c) Assess supply of cleaning supplies, sanitisers, and disinfectants and encourage their practical use
- d) Ensure sanitizing wipes and soap are readily available in lunch and breakrooms
- e) Identify common shared tools and develop procedures to sanitise between users
- f) Implement a process for routine deep cleaning of common areas, either daily/nightly or, at minimum, weekly
- g) Use no-touch containers when possible

Active Screening

- a) Designate a single point of entry for all plant processing staff and visitors
- b) Develop and implement screening questions conducted daily for all individuals entering facility
- c) Ensure employees undergo daily temperature screening prior to entering the facility
- d) Ensure screeners are trained to administer the temperature checks
- e) Ensure the screener has adequate PPE and, as applicable, maintains social distancing as testing is performed
- f) Ensure secondary screening, if offered, is conducted by staff with medical training
- g) Ensure the infrared temperature tool is properly validated prior to use

Social Distancing

- a) Limit visitors except for required essential services
- b) Maintain at least a 2 m distance whenever possible
- c) Ensure strategies are in place for social distancing during breaks
- d) Stagger breaktimes to avoid large groups of employees at once
- e) Designate additional rooms for break areas or pitch tents outside
- f) Reset break and meeting room seating to promote physical distancing
- g) Limit chairs per table
- h) Use tape on floors, if necessary, to designate spots 1 m apart
- i) Ensure cleaning of tables between use (by self-cleaning or e.g., Cargill example of laminated card flipped to red when employee finishes eating lunch to inform the cleaner the table is in need of cleaning; once the cleaner cleans, flips to green side indicating table ready for use)
- j) Maintain a 2 m distancing practice if office staff are required onsite
- k) Implement cohorting of work teams wherever possible. Work teams should be small and consistent, so that staff in close proximity to each other always work together, with lockers, breaks, and meals taken together. This serves to both decrease the number of potential exposures for each person and to simplify identifying possible exposures if a case presents

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- l) Limit crossover in entrances, corridors, and common spaces by adjusting personnel workflow
- m) Limit the number of persons in a corridor or entryway at one time
- n) Limit contact with high-touch surfaces if possible, e.g. keep doors open to allow movement
- o) Promote unidirectional flow through locker areas and when entering/exiting production floor
- p) Ensure employees enter the uniform area with clean hands
- q) Ensure touching non-selected uniform clothing and hangars is kept to a minimum

Workforce Policies

- a) Institute flexible workplace and sick leave policies and communicate these policies to all workers
- b) Institute a no-penalty approach for those taking sick leave especially if showing symptoms of COVID-19
- c) Ensure supervisors understand that they are not to penalise workers for using these benefits
- d) Recognise certain policies may incentivise employees to come to work sick (e.g. extra food at end of shift, bonus pay)

Managing a COVID-19 positive case

- a) Access to the fish ponds, fish hatcheries, rivers and lakes should be blocked to the all fishermen and staff. The area should be cordoned off and the place be disinfected with approved cleaning chemicals to avoid further spread of the virus
- b) Contact all relevant third parties who may have been exposed
- c) Clean and disinfect surfaces to limit employee exposure
- d) Work with local authorities to take appropriate steps
- e) Develop a return to work policy in coordination with the local public health department
- f) Identify workplace coordinators for COVID-19 issues and their workplace impact
- g) Coordinators should be known and accessible to all
- h) Coordinators should serve as the main source of information and primary person(s) to answer questions related to COVID-19 (e.g., Occupational Health, Plant Safety Manager)
- i) Engage plant safety/ergonomics teams and supervisors in strategy development and implementation
- j) Provide frontline supervisors additional training on COVID-19 and PPE so they can provide effective and reliable communications to workers and monitor for protective measures and PPE compliance
- k) Develop plans to operate with a reduced workforce
- l) Cross-train workers to perform essential functions to maintain operations

Testing

- a) Develop a testing strategy in coordination with local public health officials
- b) Work with local and state public health officials to conduct testing of priority cases

Personal Protective Equipment (PPE)

Train all workers on proper use of Personal Protective Equipment:

- a) Introduce measures to distribute daily cycled PPE to avoid unnecessary touching by multiple workers
- b) Ensure adequate PPE is provided to all fish production workers employees
- c) Ensure PPE is worn correctly by all employees
- d) Emphasise proper hand hygiene after gloves or facial coverings are removed
- e) Post checklist/instructions donning/doffing PPE in multiple languages
- f) Implement biosecurity measures

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INTERNAL AND EXTERNAL REFERENCES

1. Yalelo Fisheries
2. Aller Aquar
3. Fisheries Department – Ministry of Fisheries and Livestock -Zambia
4. Ministry of Health and Family Welfare, and Ministry of Home Affairs, Government of India, www.dof.gov.in
5. <https://www.unmc.edu/healthsecurity/education/programs/docs/Checklist.pdf>

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F. SOP for COVID-19 mitigation measures in the Beef Industry

Department: _____

SOP No: _____

SOP Title: _____

SOP Number: _____

SOP Title: _____

	NAME	TITLE	SIGNATURE	DATE
Author				
Reviewer				
Authoriser				

Read By				
	NAME	TITLE	SIGNATURE	DATE

PURPOSE

This standard operating procedure describes the suggested process to prevent the spread of the coronavirus or COVID-19 disease in the trading, production and processing of beef products in compliance with FAO, WHO, CDC guidelines and Ministry of Health COVID-19 protocols in the agro processing sector industry.

SCOPE

These SOPs apply to the beef sector, specifically the production and processing of beef products to stop the spread of COVID-19 using the WHO, CDC and Ministry of Health guidelines on prevention of COVID-19.

INTRODUCTION

COVID-19 is a respiratory disease spread through human-to-human transmission via droplets. Many other viruses in the coronavirus family find their origin in animals. The COVID-19 virus (also called SARS-CoV-2) is a new virus in humans. The possible animal source of COVID-19 has not yet been confirmed but research is ongoing.

To protect oneself, such as when visiting live animal markets or production sites, one is advised to avoid direct contact with animals and surfaces in contact with animals. During beef production and processing, ensure good food safety practices at all times. The World Health Organization advises handling raw meat, milk or animal organs with care to avoid contamination of uncooked foods and avoid consuming raw or undercooked animal products. These SOPs have been adapted from the WHO and COVID-19 prevention measures have been embedded in these SOPs to prevent the spread of COVID-19 pandemic.

These SOPs are adapted from Pakistan's Islamabad Capital Territory under the District Health Office, Ministry of Health Services Regulation and Coordination and also the Global Centre for Health Security.

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RESPONSIBILITIES

I. Operations Manager

- a) Ensure that only a limited, controlled number of cattle traders who sell and supply cattle to meat processing companies be allowed to sell cattle at a given time and designated place to maintain social distancing.
- b) Create spacious parking lots, with separate areas for vehicles carrying cattle and for customers, while separate entry and exit points for one-way controlled movement under the SOPs. The management will ensure controlled entry to the cattle market and the parking area will be marked as such to ensure that vehicles are parked at a safe distance from each other while no vehicle will be allowed to enter unless the space is available.
- c) Ensure that at delivery of cattle to meat processing companies, a maximum of 2 people per vehicle/car will be allowed and elderly people and children may not be allowed to enter the open market.
- d) Ensure that the delivery area has hand-hygiene facilities (handwashing with soap or alcohol-based hand sanitiser) at entry point and multiple other places within the market areas.
- e) The operations manager ensures that no person should be allowed to enter the cattle market without a face mask either for sale/purchase of animals or staff involved in market management.
- f) Ensure every person entering a cattle market area is screened and has their temperature checked and if above 37°C is not allowed entry.
- g) Ensure that all workers are advised not to share face masks or face covering with anyone and must avoid touching the insides of a mask/face covering but use new face mask immediately if the mask is soiled or becomes wet.
- h) Ensure that beef trading market premises should have functional toilets and handwashing facility with essentially required supplies including soap, tissues and paper towels.
- i) Ensure hand sanitiser is highly recommended after exchange of currency bills, handling of cattle ropes and touching shared surfaces within the market.
- j) Ensure high-touch surfaces like bars, table counter tops are cleaned with detergent and disinfected with 0.1% hypochlorite solution frequently.
- k) Ensure proper waste collection and disposal of beef carcass arrangements.
- l) Ensure thermal scanning of all staff and visitors is done by trained personnel at all entry points.

II. Occupational Safety and Health Manager

- a) Ensure awareness of COVID-19 by all employees and its impact on beef production and processing.
- b) Ensure testing becomes more readily available to all the workers to rapidly identify and address COVID-19 in this occupational setting.
- c) Educate all workers on how to prevent COVID-19 infections and the spread of the disease.
- d) Ensure all workers and visitors to the beef processing plant are screened at entry point(s).
- e) Keep employees informed of all new developments on the disease. Brief them on the need for infection control measures and the preventive procedures that have been set in place.
- f) Ensure all employees are aware of the Coronavirus Emergency help; COVID-19 HOTLINE Toll-Free: 909, Mobile +260 97 4493553 or Mobile +260 96 4638726.
- g) Be the contact and liaison person for all Ministry of Health-related updates.
- h) Ensure that a record of all employees present at a given date and time are kept for contact tracing by supervisors and managers in various departments.
- i) Be alert and able to execute emergency procedures for any worker who becomes asymptomatic of COVID-19 while at work.

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SPECIFIC PROCEDURE

1. People with fever or respiratory symptoms are advised not to visit the cattle markets.
2. Cattle should be pegged at a distance inside the farms so that close gathering of customers are avoided during the inspection of animals.
3. Disposable gloves should be employed/used while touching the animals while cattle market management staff, sellers, buyers and visitors should not share personal items like writing pens and food utensils.
4. Wipe writing pens with hand sanitisers.
5. No handshaking or hugging is allowed with anyone while gathering of more than 5 persons at one place within market premises should not be allowed.
6. Weekly medical camps or clinics, with adequate staffing of trained personnel, equipment and PPE can be established at the processing plant or farm by concerned District Health Authority. Any person detected with a high temperature will be referred to medical camps for further assessment. Staff and visitors suffering from a cough should be immediately separated and referred for further medical assessment.
7. On production lines, if fans are used in the meat processing plant or butchery facility, ensure fans blow clean air toward workers' breathing zone.
8. Employees accessing the other plant processing office for packaging materials should sanitise their hands before touching door handles or office equipment.

Meat Processing Facility COVID-19 Checklist

This document outlines a draft checklist for COVID-19 risk mitigation strategies for beef processing plants. Recommended measures to be implemented are based on the hierarchy of controls, a hazard mitigation framework that outlines controls in decreasing order of effectiveness based on Global Centre for Health security.

1. Where feasible place physical barriers between workers on the production line and identify opportunities to place other physical barriers e.g., boards, cloth or plastic sheeting in hallways to guide employee traffic to/from production and limit crossover.
2. Social distancing should be adhered to by workers at the cafeteria's lunch tables including for tables with built-in seating.

Administrative Controls

Administrative control measures available for COVID-19 include policies, procedures, training, and workplace practices. Ineffective policies or practices or inconsistent compliance may heighten exposure risks.

1. Universal Mask Policy – This Policy should be put in place for all employees and essential visitors to wear face masks at all times while in the beef processing facility.
2. Provide employees with information on proper PPE use such as face mask use.

Communication/Education

Provide easy to understand information (e.g., posters, infographics) that can be translated into the multiple languages spoken by workers. Post multilingual signage throughout facility directing risk-minimizing behaviour for employees.

Examples should include:

- a) Handwashing procedures
- b) COVID-19 symptoms and how to stop the spread
- c) Screening process/requirements
- d) Resources on social distancing outside of workplace (e.g., in homes, car sharing or pooling)

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- e) Proper hand hygiene and glove practices and refraining from touching their face
- f) General guidance for worker protection at home and in the community
- g) Information on self-monitoring of COVID-19 symptoms
- h) Information on safe social distancing practices
- i) Information on basic protective measures against COVID-19 such as:
 - i. Handwashing procedures
 - ii. Staying home when sick
 - iii. Avoiding contact with people who are sick
 - iv. Following guidance of local and state public health officials on staying home and avoiding unnecessary trips outside of the home
 - v. Engaging local community leaders (e.g., church leaders, chiefs) to help educate and relay COVID-19 message to community members
 - vi. Encouraging workers to wear cloth masks when using public transport to work (if car sharing) and to protect others when waiting to be screened prior to them receiving a new mask for their shift
 - vii. Encouraging workers to minimise car sharing if they drive to work, when possible
 - viii. Limiting the number of people per vehicle and space them out when using company vehicles

Enhanced Cleaning and Disinfection of Common Contact Areas

- a) Identify common high-touch surfaces (e.g., tables, door handles) and develop a checklist to ensure frequent sanitization throughout the day
- b) Ensure hand sanitiser dispensers are available throughout the facility, particularly at entrances, exits, and transition areas
- c) Assess the supply of cleaning supplies, sanitisers, and disinfectants and encourage their practical use
- d) Ensure sanitizing wipes and soap are readily available in lunch and breakrooms
- e) Identify common shared tools and develop procedures to sanitise between users
- f) Implement a process for routine deep cleaning of common areas, either daily/nightly or, at minimum, weekly
- g) Use no-touch containers when possible

Active Screening

- a) Designate a single point of entry for all beef plant processing staff and visitors
- b) Develop and implement screening questions conducted daily for all individuals entering facility
- c) Ensure employees undergo daily temperature screening prior to entering the facility
- d) Ensure screener is trained to administer the temperature checks
- e) Ensure screener has adequate PPE and, as applicable, maintains social distancing as testing is performed
- f) Ensure secondary screening, if offered, is conducted by staff with medical training
- g) Ensure infrared temperature tool is properly validated prior to use

Social Distancing

- a) Limit visitors except for required essential services
- b) Maintain at least a 2 m distance whenever possible
- c) Ensure strategies are in place for social distancing during breaks
- d) Stagger breaktimes to avoid large groups of employees at once
- e) Designate additional rooms for break areas or pitch tents outside
- f) Reset break and meeting room seating to promote physical distancing

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- g) Limit chairs per table
- h) Use tape on floors, if necessary, to designate spots 2 m apart
- i) Ensure cleaning of tables between use
- j) Introduce a system such as card flipped to red when employee finishes eating lunch to inform the cleaner that the table is in need of cleaning; once the cleaner cleans it, flips to green side indicating table ready for use)
- k) Maintain 2 m distancing practice if office staff are required onsite
- l) Implement cohorting of work teams wherever possible. Work teams should be small and consistent, so that staff in close proximity to each other always work together, with lockers, breaks, and meals taken together. This serves to both decrease the number of potential exposures for each person and to simplify identifying possible exposures if a case presents
- m) Limit crossover in entrances, corridors, and common spaces by adjusting personnel workflow
- n) Limit the number of persons in a corridor or entryway at any one time
- o) Limit contact with high-touch surfaces if possible, e.g. keep doors open to allow movement
- p) Promote unidirectional flow through locker areas and when entering/exiting production floor
- q) Ensure employees enter the uniform area with clean hands
- r) Ensure touching non-selected uniform clothing and hangars is kept to a minimum

Workforce Policies

- a) Institute flexible workplace and sick leave policies and communicate these policies to all workers
- b) Institute a no-penalty approach for those taking sick leave especially if showing symptoms of COVID-19
- c) Ensure supervisors understand that they are not to penalise workers for using these benefits
- d) Recognise certain policies may incentivise employees to come to work sick (e.g., extra food at end of shift, bonus pay)

Managing a COVID-19 positive case

- a) Contact relevant third parties who may have been exposed
- b) Clean and disinfect surfaces to limit employee exposure
- c) Work with local authorities to take appropriate steps
- d) Develop a return to work policy in coordination with local public health to department
- e) Identify workplace coordinators for COVID-19 issues and their workplace impact
- f) Coordinators should be known and accessible to all
- g) Coordinators should serve as the main source of information and primary person(s) to answer questions related to COVID-19 (e.g., Occupational Health, Plant Safety Manager)
- h) Engage plant safety/ergonomics teams and supervisors in strategy development and implementation
- i) Provide frontline supervisors additional training on COVID-19 and PPE so they can provide effective and reliable communications to workers and monitor for protective measures and PPE compliance
- j) Develop plans to operate with a reduced workforce
- k) Cross-train workers to perform essential functions to maintain operations
- G. SOP for COVID-19 mitigation measures in the Poultry Industry

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Department: _____

SOP No: _____

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SOP Title: _____

	NAME	TITLE	SIGNATURE	DATE
Author				
Reviewer				
Authoriser				

READ BY				
	NAME	TITLE	SIGNATURE	DATE

PURPOSE

This standard operating procedure describes the suggested process to prevent the spread of coronavirus or COVID-19 disease in the production and processing of poultry products in compliance with FAO, WHO guidelines, and CDC COVID-19 protocols in the poultry industry.

SCOPE

This procedure applies to the poultry sector specifically in the production and processing of chickens to stop the spread of COVID-19 using the WHO, CDC and Ministry of Health guidelines on prevention of COVID-19.

INTRODUCTION

COVID-19 is a respiratory disease spread through human-to-human transmission via droplets. Many other viruses in the coronavirus family find their origin in animals. The COVID-19 virus (also called SARS-CoV-2) is a new virus in humans. The possible animal source of COVID-19 has not yet been confirmed but research is ongoing.

To protect oneself, such as when visiting live animal markets or production sites one is advised to avoid direct contact with animals and surfaces in contact with animals. During chicken production and processing, ensure good food safety practices at all times. The World Health Organization advises handling raw meat, milk or animal organs with care to avoid contamination of uncooked foods and avoid consuming raw or undercooked animal products. These SOPs have been adapted from the WHO and COVID-19 prevention measures have been embedded to these SOPs to prevent the spread of COVID-19 pandemic.

DEFINITIONS

Biosafety	The application of knowledge, techniques and equipment to prevent personal, laboratory and environmental exposure to potentially infectious agents or biohazards.
Personal protective equipment	Protective clothing, helmets, goggles, or other garments or equipment designed to protect the wearer's body from injury or infection.

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RESPONSIBILITIES

Production Manager or Supervisors

- a) Educate the production workers on the dangers of COVID-19 and its implication on chicken processing and production.
- b) Train farm workers on using the procedures in this SOP.
- c) Incorporate sign languages in the communication policy regarding COVID-19.
- d) Train all employees and visitors to wash their hands regularly with soap and make handwashing easy by putting wash stands within reach of many.
- e) Train casual, illiterate workers on how to wear masks properly, dispose of them, re-use masks and clean by demonstration to ensure no language barriers.
- f) Place hand sanitisers at every entrance and exit of the chicken processing plant.
- g) Ensure social distancing as work is being implemented.
- h) Ensure sick workers or visitors do not enter the processing plant or go near the chicken meat.
- i) Ensure the placing of simple visible signs on the farm for all to see. Communicate to farm workers and truck drivers using clear signage around the farm. The signs should show where the handwashing stations are and where the bathroom and toilets are. Place signs to let people know the policies including where to stand, what container to touch, handwashing and sanitizing points.
- j) Ensure delivery truck drivers are screened before entering a farm, their temperature should be checked, their hands washed or sanitised.
- k) Ensure adherence to biosecurity measures.
- l) Ensure workers wear rubber gumboots, gloves, clean overalls and sanitise their hands before picking or touching vegetables.
- m) Ensure that all employees in the processing plant wear masks at all times and have their body temperatures checked as they report for work before entering the farm premises.
- n) Ensure that physical distancing of about 1.5-2 m be observed as farm workers carry out their duties and as they take lunch breaks. In poultry houses, a bucket of water containing a disinfectant or soap must be placed at the entrance and a footbath created.
- o) Ensure all farm workers wash their work clothes or overalls using a detergent washing soap before they close for the day.
- p) Ensure social distancing is maintained as farm workers have their meals.
- q) Ensure safe storage of all re-usable PPEs (Personal Protective Equipment). These should not leave the chicken processing plant to avoid exposure to COVID-19.
- r) Ensure surfaces such as counter tops or tables used to cut and debone chicken are cleaned regularly with clean water and anti-bacterial solution.
- s) Ensure wrapping machines, door handles, and tool shades are thoroughly disinfected first thing in the morning and at knocking-off time. All tools and equipment handles must be disinfected or sanitised before being used by the workers
- t) Ensure drivers sanitise their hands before signing delivery notes and stock taking.
- u) Ensure proper stacking of packaging materials so that workers won't have to touch multiple boxes in order to find theirs.
- v) Ensure documentation of the precautions the plant is taking at the farm or any delivery sites. These records are helpful to show the measures your farm is taking in keeping your customers safe.
- w) Ensure wrapping machines are cleaned with clean water or sanitised.
- x) Ensure all the workers involved in the processing of chickens wear masks, gloves and receiving bays are kept clean by disinfecting/sanitizing. Social distancing must be observed by those collecting the chicken.
- y) Ensure that any handler that came or comes in contact with an ill person is tested for COVID-19

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and contact tracing is implemented.

Occupational Safety and Health Manager

- a) Ensure awareness of COVID-19 by all employees and its impact on chicken production and processing.
- b) Ensure testing becomes more readily available to all the workers to rapidly identify and address COVID-19 in this occupational setting.
- c) Educate all workers on how to prevent COVID-19 infections and spread of the disease.
- d) Ensure all workers and visitors to the chicken processing plant are screened at entry point(s).
- e) Inform employees of all new developments on the disease. Brief them on the need for infection control measures and the preventive procedures that have been set in place.
- f) Ensure all employees are aware of the Coronavirus Emergency help; COVID-19 **HOTLINE Toll-Free: 909**, Mobile +260 97 4493553 or Mobile +260 96 4638726
- g) Be the contact and liaison person for all Ministry of health-related updates.
- h) Ensure that a record of all employees present at a given date and time are kept for contact tracing by supervisors and managers in various departments.
- i) Be alert and able to execute emergency procedures for any worker who becomes asymptomatic of COVID-19 while at work.

SPECIFIC PROCEDURE

1. Production workers working in chicken runs and chicken processing plants should know, understand and use COVID-19 SOPs for their day-to-day work.
2. Farm managers and anyone working on the farm must understand and use the good management practices that will protect staff, suppliers and customers from contracting COVID-19.
3. All those who work on the farm should be familiar with the HR and production manuals and understand the rules and regulations around workplace health and safety.
4. Farm and production sites staff and supplier/visitors must adhere to COVID-19 biosecurity protocols.
5. Workers must not be allowed to share re-usable face coverings or face masks among themselves or with family members.
6. A training record of the COVID-19 SOPs must be kept for each employee. This record can simply be a sign-off that they have read and understood the COVID-19 SOPs.
7. Staff must be observed for any sign or symptoms of COVID-19 regularly as they perform their duties and receive additional training, if necessary.
8. Approved cleaning and sanitizing chemicals used on food contact surfaces must be used according to the manufacturer's instructions.
9. When vaccinating chicks, all drivers of delivery vans must follow all the COVID-19 protocols; such as wearing gloves, washing hands, sanitizing hands and wiping pens with sanitiser.
10. Before collecting eggs, workers should use new disposable gloves, new face masks and discard them after a single use.
11. Spitting around the farm or production area must be discouraged.
12. Personnel health and hygiene – interview and visually check farm workers and processing personnel for health and personal hygiene considerations, before approving anyone for chicken or eggs handling. Send anyone found with flu symptoms on sick leave.
13. The slaughter area must be kept clean all the times throughout the daily operations.
14. As chicken farm workers report to work, they must be wearing masks, their body temperature must be checked then their details such as name, residential area, phone numbers must be recorded for contact tracing. Any worker seemingly asymptomatic must not be allowed entry into

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- the farm.
15. Chicken feathers and manure should be deposited into receptacles for inedible material.
 16. After cleaning/rinsing work areas, apply sanitiser to all contact surfaces and pick up any pieces of bones, fat, meat or other matter and deposit into container for inedible material.
 17. Chicken handlers must maintain social distance of at least 1.5 m while working, especially on production lines, and in nonproduction settings during breaks and while entering and exiting the farm.
 18. Structural and operational challenges such as workers only covering mouths frequently and not noses, production facilities should adjust the shifts. The start and stop times of shifts and breaks to increase physical distance between workers.
 19. Outdoor break resting areas should be added at some facilities to reduce contact between workers. Some facilities can install physical barriers between workers where possible.
 20. Translate COVID-19 literature into local languages for all workers to understand and so as to enhance adherence to the COVID-19 SOPs.
 21. Educate and train employees and supervisors on safety and health information; no worker working while experiencing symptoms of COVID-19 should be allowed to continue working on the plant premises.
 22. Where possible, to avoid exposure to COVID-19 by production workers through the use of company transport, the management should increase the number of vehicles and reduce the number of passengers per vehicle to help maintain physical distancing.
 23. Processing plants should avoid crowded conditions for workers in poultry processing facilities to prevent transmission. There must be intensified attention to worker safety.
 24. Whenever feasible, the workplace should be organised so that workers can be at least 1 m apart at the farm or on the production line.
 25. Options such as including stationing workers so that they are not facing each other and positioning fans or air conditioners so that they do not blow air from one worker directly onto another.
 26. Maintaining recommended hand hygiene requires access to handwashing stations, sufficient availability and the use of alcohol-based hand sanitiser in areas where handwashing buckets are not available.
 27. Poultry processing facilities should use extensive procedures for cleaning and sanitation as required by the Council Public Health Department for food safety. Surfaces should be thoroughly cleaned and then disinfected according to usual facility standard operating procedures. Frequently touched areas such as handles, buttons, and railings should be disinfected with products that are effective for use against COVID-19 and are approved under the facility's disinfection standard operating procedures.
 28. Administrative interventions can support the infection control plan; HR policies should be revised to encourage symptomatic workers to stay home. Personnel policies that allow the use of leave when ill without loss of pay can enable symptomatic workers to stay home. Also, HR should avoid encouraging any incentives that might encourage workers to come to work while symptomatic.
 29. Other paramount administrative controls to ponder are plans for isolation of workers who become ill while at work.
 30. When physical distancing is not feasible face masks become mandatory. It is recommended that face masks should also be worn in non-production areas such as entrances, exits, toilets, shared vehicles, and other areas in which maintenance of social distancing is challenging.
 31. There should not be complacency with use of PPE in the usual operation of meat and poultry processing facilities. In the course of using PPE, facilities should emphasise correct wearing and taking off of PPE to prevent contraction of the disease by the worker. PPE should be disposed

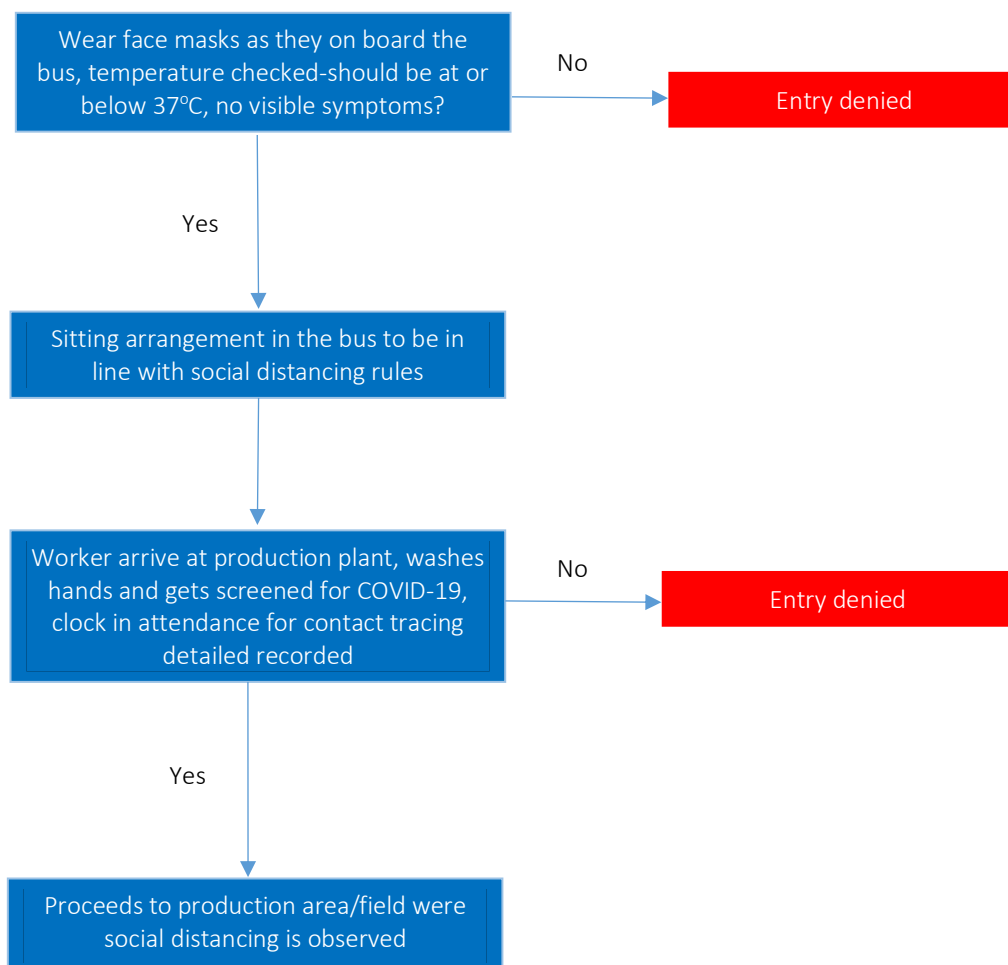
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of or properly disinfected and stored when not in use. Face shields are equipment that might serve as both PPE and source control in certain situations.

32. Regular infection control and occupational safety and health training should be provided for all workers and supervisors on the farm. These should be tailored to literacy levels and preferred languages. Specifics of training should include, but are not limited to, what workers should do when they feel ill before or at work, symptoms of COVID-19, medical leave policies, correct use of PPE and face coverings, and hand hygiene practices.

Procedure for the managing of visitors and employees as they report for work Workflow for employees and visitor screening at the workplace

Production workers and visitor screening



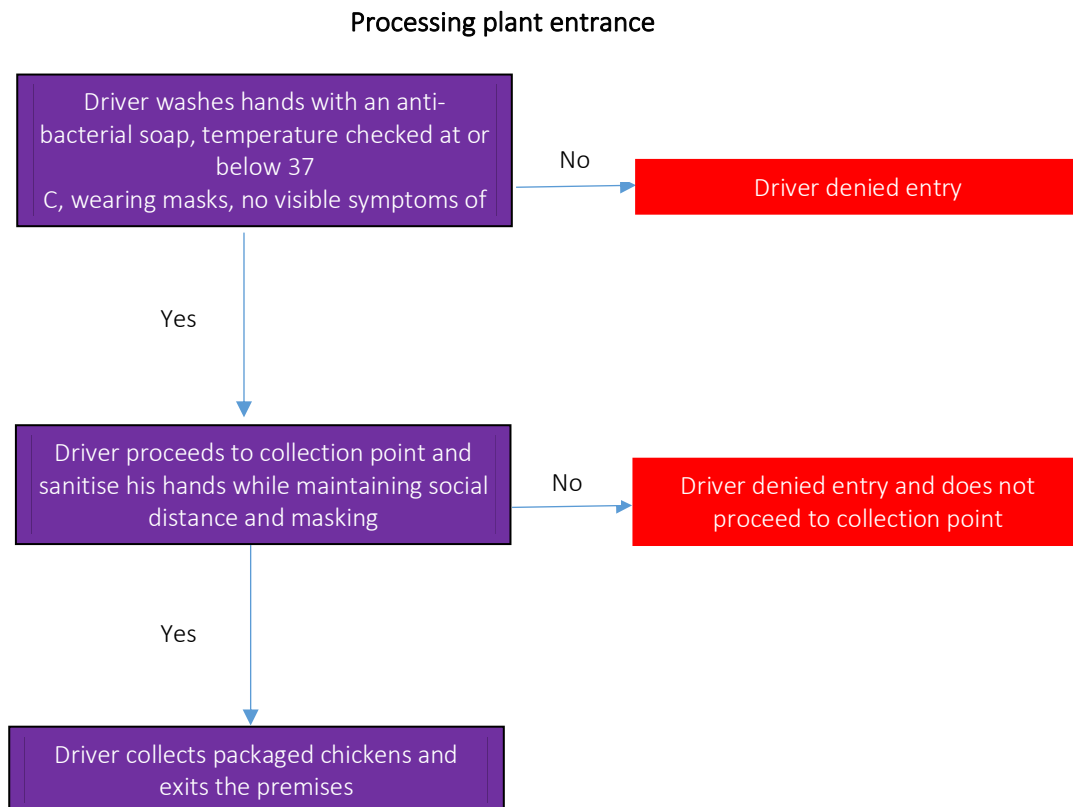
Before entering the chicken production plant, the workers must wash their hands before wearing gloves and headgear. A bucket of water and liquid anti-bacterial soap must be placed within reachable vicinity for the workers. As they work, social distancing of at least 1.5 m must be observed between and among workers. They must be taught to cough using a bended elbow.

- a) Movements for those living on the farm (farm quarters) must be minimised to reduce exposure to COVID-19 and transmission.
- b) Workers should be reminded to cough with a flexed elbow when coughing or sneezing.

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Work flow diagram for delivery truck driver

Before delivery trucks are allowed entry onto a farm's premises, biosecurity measures must be followed; the vehicle tyres must be sprayed or driven through a footbath containing a disinfectant. The driver must also be screened by having his/her temperature checked, wearing a mask, wash their hands or sanitise. If there is any exchange of delivery notes and signing of any documents, pens should be sanitised by wiping them with an alcohol-based sanitiser alongside hands before touching books or papers, or folders. Any driver showing symptoms such as a high temperature, flu-like symptoms must not be allowed entry into the processing plant.



- i. Communicate in advance to transport and logistics department or to transport companies about the new SOPs protocols.
- ii. Delivery trucks/vans must drive through a footbath containing liquid disinfectants or tyres sprayed with a disinfectant.
- iii. If there is any exchange of delivery notes and signing of any documents, pens should be sanitised by wiping them with an alcohol-based sanitiser alongside hands before touching books or papers.
- iv. Reduce cross-contamination at collection or delivery points: use disinfectant wipes for things like pens and pencils, clipboards, surfaces where you're leaving boxes, and door handles.

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Social Distancing

- a) Social distancing is a strategy to reduce the spread of COVID-19 by limiting interactions with others. Workers that are able to telework should be encouraged to do so. For essential onsite workers, workers should maintain a distance of at least 2 m from others whenever possible. Physical barriers (e.g. plexiglass partitions) should be installed on the production line, where possible.
- b) Measures to promote social distancing in chicken processing facilities are noted below.
 1. Develop a policy to limit visitors except for required essential services
 2. Where able, keep drivers in their trucks and provide them with alternative washroom and hand hygiene stations outside of the facility
 3. Implement strategies for social distancing during breaks
 4. Stagger breaktimes to avoid large groups of employees
 5. Provide additional rooms for break areas or erect tents outside of the facility
 6. If workers want to eat in their personal vehicles, encourage hand hygiene and, if able, provide sanitizing wipes to workers for disinfection
 7. Reset break and meeting rooms to promote physical distancing
 8. Use visual markers (e.g., "X" taped on seat) to identify seats that are appropriately distanced
 9. Use tape on floors, wherever lines form, to designate spots 2 m apart (e.g., locker rooms, screening areas, human resources office, where PPE is distributed)
 10. If office staff are required onsite, maintain 2 m distancing practice in all work areas
 11. Conduct meetings from office using video or conference call technology as much as possible
 12. Create walk-up windows for employees needing assistance from HR or Health Services
 13. As able, assign individuals to monitor social distancing during breaks, lunch, and the screening process

Personal Protective Equipment (PPE)

PPE is considered the least effective method to protect workers due to its reliance on the user; if the user wears it improperly, or the PPE fails, the worker is exposed. However, PPE is still important.

1. Workers should be provided with appropriate PPE and trained on its correct use. Appropriate PPE should be provided to all employees. Per the Universal Mask policy recommendation, all employees and essential visitors/contractors should be provided a procedure mask, when available, upon entrance to the facility due to close contact with other employees. Cloth masks may not provide the needed protection for these workers but are an alternative if procedure masks are unavailable. Beard covers provide no protection and should not be used as an alternative for a face covering. Reusable PPE (e.g., face shields) should be properly disinfected after use and stored in a clean, dry location.
2. Employers should validate that all employees wear PPE properly and correctly.
3. The mask should cover both the mouth AND nose.
4. Avoid touching the front of the mask and do not allow the mask to hang around the neck.
5. If necessary, identify auditors/observers to help ensure compliance. Careful compliance to proper mask use is essential.
6. Emphasise proper hand hygiene after facial coverings are removed.
7. When taking off the mask during lunch to eat, remove by the ear loops and place on a paper towel with the exterior side of mask down.
 - a) do not touch the front of the mask, as the front is contaminated
 - b) The mask should not be pushed under the chin to rest on the neck
8. Post a checklist or instructions informing proper donning and doffing of PPE in the languages

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- spoken by the workers and include visual images.
9. Doffing of PPE to reduce disease transmission is especially critical: checklists should ensure hands are clean/sanitised when taking off safety goggles, masks, or any other item that may cause a worker to touch their face.
 10. Provide masks at the earliest possible point during the screening process.
 11. Provide a hand sanitiser dispenser at the point of mask distribution so workers can mask up with clean hands.
 12. Allow workers to select their own mask to avoid unnecessary touching by others.

Mandatory Procedures and Recommendations

1. All employees shall wear face masks at all times at the work place, and adequate stock of such face covers shall be made available.
2. Seating arrangements/worktables must be at least 1 m apart, maintaining physical distancing norms. Operator and material movement pathway to be demarcated on the floor.
3. Employees shall work from their seats and avoid going to other's seats as far as possible. Intercom facility/mobile phones shall be used.
4. All common areas, work tables, canteens, lifts, conference halls, visitor lounge/area, staircase and handrails must be disinfected with 1% sodium hypochlorite solution on a shift basis (minimum thrice daily).
5. Sufficient quantities of handwash/sanitisers shall be made available in the work places.
6. Pantry and washrooms must be hygienic and disinfected/sanitised every 2 hours with 1% sodium hypochlorite solution or commonly used detergents. Washrooms must contain hand-wash with functional dispenser mechanism.
7. Lifts and common areas should not be used more than 30% of designated capacity. Employees to be encouraged to use stairs.
8. Strict ban on use of chewing gum, tobacco (smoking, chewing) and spitting inside factory premises.
9. Lunch break and other breaks must be staggered to avoid crowding of employees in cafeteria/canteen and other common area, physical distancing must be maintained in cafeteria/canteen and cafeteria/canteen workers must wear hand gloves, face mask, head cover always.
10. Employees to carry own water bottle and must maintain hygiene while refilling water bottles.
11. In-house and off-site meetings shall be avoided unless absolutely necessary. Virtual meetings are encouraged wherever possible. If in-person meeting is inevitable, then physical distancing must be ensured.
12. Doors shall be kept open or devised with alternate opening arrangement to minimise or avoid handling knobs.
13. One emergency vehicle must be made available for every shift.
14. Workspace must be well ventilated through natural source.
15. Avoid visitors and hardcopy/files/papers to the extent possible.
16. Persons above 65 years of age, employees with co-morbid conditions like hypertension, diabetes mellitus, cardiac conditions etc., pregnant, expecting mothers, persons with disability, mothers with crèche-going children, pre-existing illness, shall be asked to work from home.
17. Sick workers should stay home or go home if they develop symptoms during the work day.
18. A response team and incident manager shall be appointed in the company to ensure quick action in case there is any suspected case or exposure.

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Action to be taken on detection of suspected/confirmed COVID-19 Case in workplace

1. Staff need to be strictly aware that they should not report to work with symptoms of COVID-19.
2. If an employee/worker becomes unwell in the workplace with typical symptoms of COVID-19, he/she should be immediately moved to an area away from other workers. if possible, in a room or area where he/she could be isolated behind a closed door, such as a staff office. Open the window for ventilation wherever possible and switch off the AC.
3. The employee/worker who is unwell should be provided with a N-95 mask and he/she must wear it. While waiting for medical advice, he/she should avoid any contact with other employees, avoid touching people, surfaces, and objects and be advised to cover mouth and nose with a disposable tissue while coughing or sneezing and then dispose of the tissue in a closed bin. If tissues are not available, he/she should cough and sneeze by covering with his/her elbow and if needed to go to the bathroom, should use a separate bathroom, if available. In short, he/she shall follow cough etiquette, hand hygienic practices and physical distancing from other co-workers.
4. If an employee/worker reports of COVID-19 symptoms over the phone or is unwell in the workspace, then the patients or employer should contact Coronavirus Emergency help; COVID-19 HOTLINE Toll-Free: 909, Mobile +260 97 4493553 or Mobile +260 96 4638726 or directly visit the nearby fever clinic/hospital for medical consultation.
5. If an employee tests positive in the workplace, the event should be reported to the Ministry of Health using the hotline and toll-free numbers.
6. Once a confirmed case is detected in the workspace, the establishment should facilitate the MoH authorities in carrying out contact listing and tracking as per the guidelines of MoH.
7. Entire office should be sanitised including all surfaces, floors, lifts, railings, stairs desks, vehicles etc. using 1% sodium hypochlorite. The facility can be re-used from the next day.
8. If the establishment/ facility continues to report new COVID-19 cases in the following days, MoH shall further investigate and recommend further action on a case-to-case basis.
9. After the employee is free from symptoms and fully recovers, he/she shall report back to work following medical advice
10. Irrespective of the COVID-19 status, all surfaces that the symptomatic employee has come into contact with must be cleaned with 1% sodium hypochlorite solution including all surfaces and objects visibly contaminated with body fluids/respiratory secretions, and all potentially contaminated high-contact areas such as telephones, computers, tables, door handles, toilets, etc.
11. All staff should wash their hands thoroughly for 20 seconds with soap and water or use alcohol-based hand sanitisers after any contact with someone who is unwell with symptoms consistent with COVID-19.

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INTERNAL AND EXTERNAL REFERENCES

Westerly Breeze Farm-Apollo area Mungwi Road-Lusaka West and the following website resources:

1. <http://www.fao.org/3/a-i2364e.pdf>
2. <https://www.cdc.gov/mmwr/volumes/69/wr/mm6918e3.htm>
3. <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/q-a-coronaviruses>
4. <https://www.ontariochicken.ca/Orientation-Guide-for-Ontario-Chicken-Farmers/Emergency-Management/7-1-Disease-Suspected-or-Confirmed.aspx>
5. <https://ucanr.edu/sites/placernevadasmallfarms/files/186601.pdf>
6. https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/normativeinstrument/wcms_161135.pdf
7. <https://covid19.karnataka.gov.in/storage/pdf-files/SOP-Ind-est.pdf>

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APPENDICES

APPENDIX 1: CORONAVIRUS (COVID-19) GUIDANCE FOR EMPLOYERS

This document has been adapted from lessons learned from the Equality and Human Rights Commission² of the UK.

As an employer, you are under legal obligations to ensure the decisions you make in response to coronavirus (COVID-19) do not directly or indirectly discriminate against employees with protected characteristics.

1. Do not make decisions based on protected characteristics

Protected characteristics are:

1. Age
2. Disability
3. Gender Reassignment
4. Marriage and Civil Partnership
5. Pregnancy and Maternity
6. Race
7. Religion or Belief
8. Sex
9. Sexual Orientation

This includes decisions about returning to work, for example who to bring back to the physical workplace, who gets extra hours or who is made redundant.

This would be **direct discrimination**. Examples include:

- A manager asking a female employee working from home to check in with him more than a male employee, because of an assumption that the woman is more likely to be distracted by her children.
- An employer deciding it will no longer recruit candidates from any ethnic minority to front-line roles after finding out some ethnic minorities are disproportionately impacted by coronavirus (COVID-19).
Employees over 60 not being informed that the physical workplace is reopening, as you do not want them to return because of the potential risk – the employer should consider less discriminatory ways of protecting older employees.

Discrimination arising from a disability

Disabled employees must not be treated unfavourably because of something connected to their disability, where you cannot show that it is objectively justified. This applies if you know or could reasonably have been expected to know that the person is a disabled person. Examples include:

- An employer rejecting a late appeal against redundancy because an employee's learning disability meant they needed extra help – the employee has been treated unfavourably because of something arising from their disability (rather than because of the disability itself).
- An employer dismissing an employee who has been off work for a long period of time due to long-term ill health and is now shielding – the employer must be able to objectively justify any dismissal, including why reasonable adjustments could not be made.

² <https://www.equalityhumanrights.com/en/advice-and-guidance/coronavirus-covid-19-guidance-employers>

- An employer making redundancies is influenced by discriminatory assumptions about a disabled employee's performance, such as them taking more absence leave than non-disabled employees in the future – the employer should instead use objective selection criteria and ask at least 2 managers to independently score each employee to avoid discriminatory bias.

2. Take into account the needs of individual employees

- Set up work stations, shifts and working from home according to their needs.
- Update risk assessments to consider the disproportionate impact of coronavirus (COVID-19) on specific groups, such as ethnic minorities, pregnant and older workers, and how to mitigate these risks.
- Implement or expand flexible working options to meet the needs of employees. This could include those with parenting or caring responsibilities who may have lost their childcare arrangements. It could also include disabled people and those with long-term illnesses, including mental health conditions – do not make assumptions that remote working automatically benefits everyone.

If you equally apply a policy or practice to everyone, you may place someone with a particular characteristic at a disadvantage. This would be **indirect discrimination**, unless it is objectively justified or you have a real need to apply the policy and do so in a way that is necessary and appropriate. Examples include:

- Requiring all employees to continue to work in front-line, key worker roles – this would have a greater impact on those who need to self-isolate or follow the social distancing guidance more strictly, such as disabled, older or pregnant employees or ethnic minority staff due to the disproportionate impact of coronavirus (COVID-19).
- An employer thinking a fair approach to redundancies would be to review employees' sales figures from the past 2 years, using the lowest as criteria for redundancy – they realise after consulting staff this will disadvantage women who have been on maternity leave, which would be indirect sex discrimination.
- An employer taking over communal staff facilities to create extra work space for social distancing, disadvantaging employees with religious beliefs who lose prayer spaces – this can only be justified if use of these rooms is the only way the employer can ensure employee safety.

3) Communicate with employees

- Involve them in decision-making processes.
- Pay attention to specific communication needs, such as those on maternity leave, disabled employees or ethnic minority staff who may want to raise concerns about the disproportionate impact of coronavirus (COVID-19).
- Have conversations about updated risk assessments, current caring responsibilities and arrangements, wellbeing, mental health and employees' ability to carry out their job.

Examples of effective communication include:

- An employer considering how to provide safety information to all staff, using posters and ensuring they are read to staff with visual impairments – if they had not, they would have been vulnerable to a claim of indirect discrimination.
- An employer carrying out a risk assessment for employees returning to the physical workplace talks to different employee groups and trade union reps to hear different concerns and mitigate any negative impacts.

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4. Record your decisions and track their impact

Useful question to ask include:

- Who has been placed on furlough?
- Who has been made redundant?
- Who has been asked to return to the workplace?
- Who has gone on unpaid leave?
- How many reasonable adjustment requests have been approved?
- Who has been offered flexible working patterns?

This will help ensure you're not discriminating against any specific group and may help prove that your decisions are objectively justified.

If you're a public sector employer, you also have requirements under the public sector equality duty to consider the need to avoid discrimination, advance equality of opportunity and foster good relations. Conducting an equality impact assessment should help you to meet these obligations.

Why this is important

There are lots of reasons why following inclusive practices makes good business sense, including:

- Three quarters of employers told us it attracts highly-skilled talent and increases staff commitment and retention
- It builds organisational resilience and reputation as the future of work looks likely to change
- It removes barriers to employment often faced by those with protected characteristics and reduces absence and related costs
- Employers with existing equality action plans have been able to respond quickly and positively to new challenges

If you make decisions that discriminate against an employee, you may be at risk of:

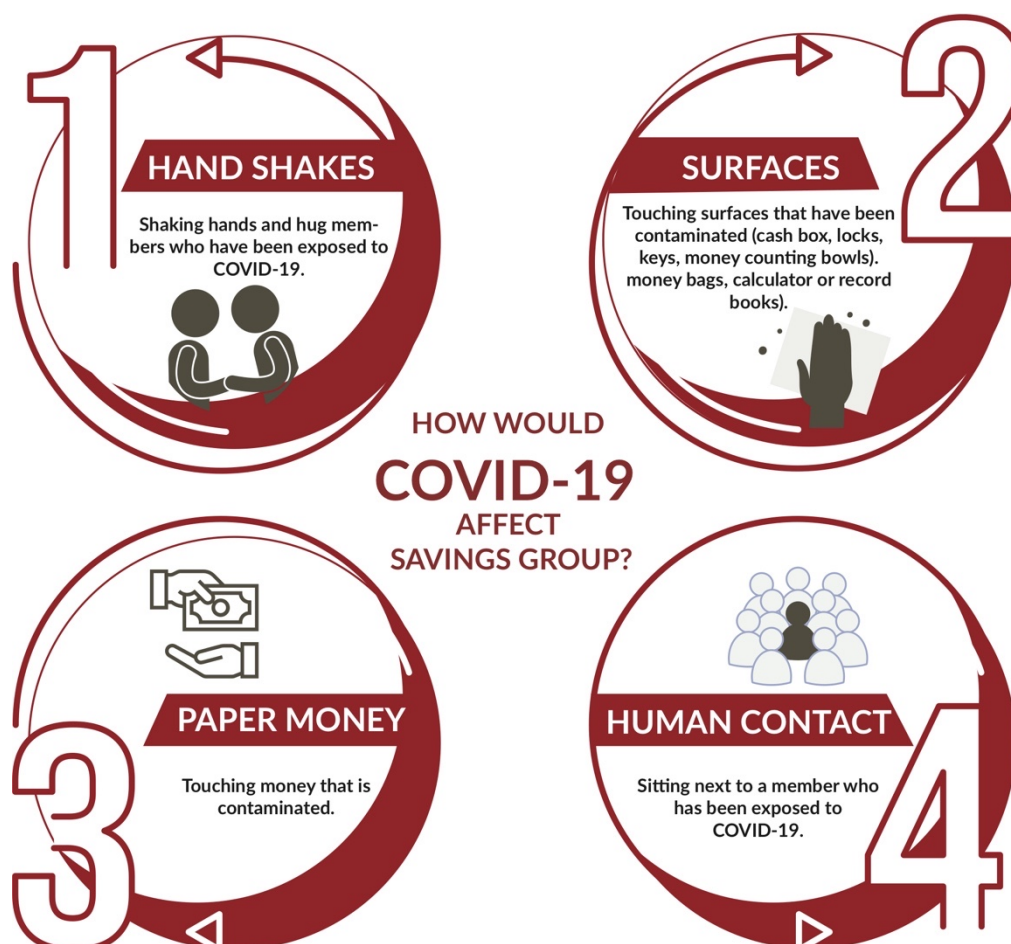
- Having a claim brought against you at an employment tribunal
- Costly compensation fees
- Reputational damage

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APPENDIX 2: COVID-19 GUIDELINES FOR SAVINGS GROUPS³

How would COVID-19 affect your savings group?

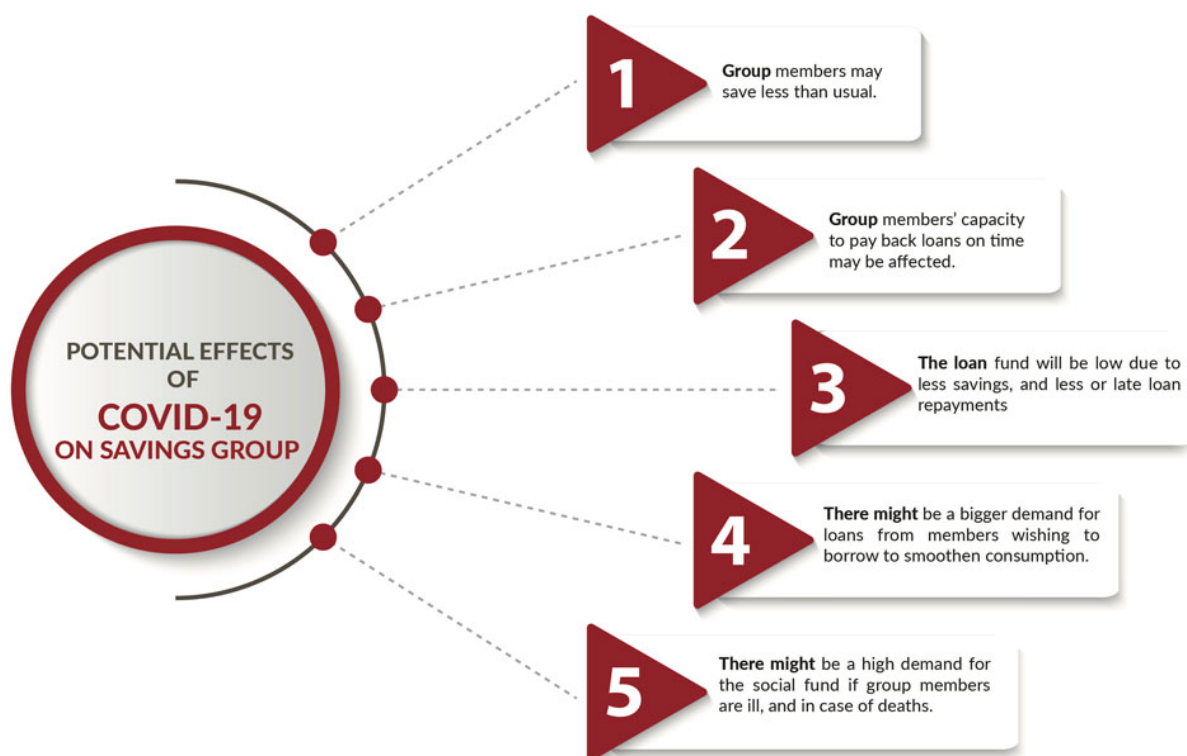
When you meet as a group, you come from different homes and some members may have been exposed to COVID-19. You are at risk of infection during the meeting if for example, you engage in:



Some of your group members may experience financial difficulties during this period due to loss of income. Restrictions on movements during this period might mean that some group members will not freely go the market to trade, (similarly, buyers will stay at home and not buy goods and services), companies may close and lay off workers and some members may stay at home sick or will be nursing sick family members. This may affect your savings group in the following ways:

³ <https://www.fsdzambia.org/covid-19-guidelines-for-savings-groups/>

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The World Health Organisation and Ministry of Health have put in place measures to ensure you, your family and fellow group members are safe and healthy. There are also rules and measures to regulate meetings which everyone must adhere to.

In addition, it is recommended that savings groups also follow the guidelines below.

WHAT CAN SAVINGS GROUPS DO DURING THIS PERIOD?

Meetings

1. Reduce meeting times (e.g., instead of weekly, meet once a month) and encourage only a few members to attend meetings to avoid overcrowding especially if meetings are held in a small room.
2. Practice social distancing – sit at least 1 m from each other. Remember not to shake hands or hug.
3. Members in high risk categories like the elderly, pregnant, sick or having pre-existing health conditions such as diabetes, asthma, bronchitis, cancer and HIV, should appoint a relative or friend they trust to participate on their behalf. Members should also avoid coming to the meeting with children.
4. Please enforce handwashing; provide a handwashing bucket or container with soap/sanitiser for members coming to the meeting. Ensure gloves are available for money counters and persons holding keys to the cashbox. If gloves are not available, use hand sanitiser before and after the meeting.
5. Members, especially money counters should not touch their faces when counting money.

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6. If all members have cell phones, consider having a digitised meeting where members send savings, loans and social funds through mobile money or other virtual means. This could be safe but requires that all members learn how to do this properly.
7. Please ensure that your group funds and cash box are always secured.
8. Your group could also consider safer places to keep the group fund such as in a mobile money account, or microfinance institution or bank.

Social Fund

- Decide on how you will handle social funds to assist members in emergency cases.
- Consider having a special COVID-19 fund.

Savings and Loans

- Continue saving even as little as the minimum share amounts as these will be helpful during the post-pandemic recovery process.
- Where possible, avoid in-person meetings and consider transacting using digital means or mobile money. This could include having a few people collect the funds, record member contributions, and consolidate them. The management committee can then disburse loans and pay out social funds on request.
- In the worst case:
 - Consider revising or rescheduling savings and repayments which could include shorter lending cycles; revised loan terms; lower loan values or stop lending altogether.
 - Where there is an immediate need to access savings or there is a risk of keeping funds in the near term, consider accelerating the share-out. Share-outs should only take place once outstanding loans are repaid.

WHO CAN SAVINGS GROUPS TURN TO FOR FURTHER SUPPORT?

- Follow official Ministry of Health updates to ensure that you comply with all safety measures.
- Contact your savings group trainer if you need any clarifications on the guidelines.

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APPENDIX 3: WHO GUIDELINES FOR GETTING YOUR WORKPLACE READY FOR COVID-19

1. Simple ways to prevent the spread of COVID-19 in your workplace

The low-cost measures below will help prevent the spread of infections in your workplace, such as colds, flu and stomach bugs, and protect your customers, contractors and employees.

Employers should start doing these things now, even if COVID-19 has not arrived in the communities where they operate. They can already reduce working days lost due to illness and stop or slow the spread of COVID-19 if it arrives at one of your workplaces.

- Make sure your workplaces are clean and hygienic
 - Surfaces (e.g. desks and tables) and objects (e.g. telephones, keyboards) need to be wiped with disinfectant regularly
Why? Because contamination on surfaces touched by employees and customers is one of the main ways that COVID-19 spreads
- Promote regular and thorough handwashing by employees, contractors and customers
 - Put sanitizing hand rub dispensers in prominent places around the workplace. Make sure these dispensers are regularly refilled
 - Display posters promoting handwashing – ask your local public health authority for these or look on www.WHO.int.
 - Combine this with other communication measures such as offering guidance from occupational health and safety officers, briefings at meetings and information on the intranet to promote handwashing
 - Make sure that staff, contractors and customers have access to places where they can wash their hands with soap and water
Why? Because washing kills the virus on your hands and prevents the spread of COVID19
- Promote good respiratory hygiene in the workplace
 - Display posters promoting respiratory hygiene. Combine this with other communication measures such as offering guidance from occupational health and safety officers, briefing at meetings and information on the intranet etc.
 - Ensure that face masks⁴ and/or paper tissues are available at your workplaces, for those who develop a runny nose or cough at work, along with closed bins for hygienically disposing of them
Why? Because good respiratory hygiene prevents the spread of COVID-19
- Advise employees and contractors to consult national travel advice before going on business trips.
- Brief your employees, contractors and customers that if COVID-19 starts spreading in your community anyone with even a mild cough or low-grade fever (above 37°C) needs to stay at home. They should also stay home (or work from home) if they have had to take simple medications, such as paracetamol/acetaminophen, ibuprofen or aspirin, which may mask symptoms of infection
 - Keep communicating and promoting the message that people need to stay at home even if they have just mild symptoms of COVID-19.

⁴ Ordinary surgical face masks rather than N95 face masks

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- Display posters with this message in your workplaces. Combine this with other communication channels commonly used in your organization or business.
- Your occupational health services, local public health authority or other partners may have developed campaign materials to promote this message
- Make clear to employees that they will be able to count this time off as sick leave.
-

2. How to manage COVID-19 risk when organizing meetings and events

Why do employers and organisers need to think about COVID-19?

Organisers of meetings and events need to think about the potential risk from COVID-19 because:

- There is a risk that people attending your meeting or event might be unwittingly bringing the COVID-19 virus to the meeting. Others might be unknowingly exposed to COVID-19.
- While COVID-19 is a mild disease for most people, it can make some very ill. Around 1 in every 5 people who catch COVID-19 needs hospital treatment.

Key considerations to prevent or reduce COVID-19 risks

BEFORE the meeting or event

- Check the advice from the authorities in the community where you plan to hold the meeting or event. Follow their advice.
- Develop and agree a preparedness plan to prevent infection at your meeting or event.
 - Consider whether a face-to-face meeting or event is needed. Could it be replaced by a teleconference or online event?
 - Could the meeting or event be scaled down so that fewer people attend?
 - Ensure and verify information and communication channels in advance with key partners such as public health and health care authorities.
- Pre-order sufficient supplies and materials, including tissues and hand sanitiser for all participants. Have surgical masks available to offer anyone who develops respiratory symptoms.
 - Actively monitor where COVID-19 is circulating. Advise participants in advance that if they have any symptoms or feel unwell, they should not attend.
 - Make sure all organisers, participants, caterers and visitors at the event provide contact details: mobile telephone number, email and address where they are staying. State clearly that their details will be shared with local public health authorities if any participant becomes ill with a suspected infectious disease. If they will not agree to this, they cannot attend the event or meeting.
- Develop and agree a response plan in case someone at the meeting becomes ill with symptoms of COVID-19 (dry cough, fever, malaise). This plan should include at least:
 - Identify a room or area where someone who is feeling unwell or has symptoms can be safely isolated or have a plan for how they can be safely transferred from there to a health facility.
 - Know what to do if a meeting participant, staff member or service provider tests positive for COVID-19 during or just after the meeting
 - Agree the plan in advance with your partner healthcare provider or health department.

DURING the meeting or event

- Provide information or a briefing, preferably both orally and in writing, on COVID-19 and the measures that organisers are taking to make this event safe for participants.
 - Build trust. For example, as an icebreaker, practice ways to say hello without touching.

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- Encourage regular handwashing or use of an alcohol rub by all participants at the meeting or event.
- Encourage participants to cover their face with the bend of their elbow or a tissue if they cough or sneeze. Supply tissues and closed bins to dispose of them in.
- Provide contact details or a health hotline number that participants can call for advice or to give information.
- Display dispensers of alcohol-based hand rub prominently around the venue.
- If there is space, arrange seats so that participants are at least 1 m apart.
- Open windows and doors whenever possible to make sure the venue is well ventilated.
- If anyone starts to feel unwell, follow your preparedness plan or call your hotline.
 - Depending on the situation in your area, or recent travel of the participant, place the person in the isolation room. Offer the person a mask so they can get home safely, if appropriate, or to a designated assessment facility.
- Thank all participants for their cooperation with the provisions in place.

AFTER the meeting

1. Retain the names and contact details of all participants for at least 1 month. This will help public health authorities trace people who may have been exposed to COVID-19 if one or more participants become ill shortly after the event.
2. If someone at the meeting or event was isolated as a suspected COVID-19 case, the organiser should let all participants know this. They should be advised to monitor themselves for symptoms for 14 days and take their temperature twice a day.
3. If they develop even a mild cough or low-grade fever (i.e. a temperature above 37°C) they should stay at home and self-isolate. This means avoiding close contact (1 m or nearer) with other people, including family members. They should also telephone their healthcare provider or the local public health department, giving them details of their recent travel and symptoms.
4. Thank all the participants for their cooperation with the provisions in place.

3. Things to consider when you and your employees travel

- **Before traveling**
 - Make sure your organization and its employees have the latest information on areas where COVID-19 is spreading. You can find this at <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports/>
 - Based on the latest information, your organization should assess the benefits and risks related to upcoming travel plans.
 - Avoid sending employees who may be at higher risk of serious illness (e.g. older employees and those with medical conditions such as diabetes, heart and lung disease) to areas where COVID-19 is spreading.
 - Make sure all persons travelling to locations reporting COVID-19 are briefed by a qualified professional (e.g. staff health services, health care provider or local public health partner)
 - Consider issuing employees who are about to travel with small bottles (under 100 CL) of alcohol-based hand rub. This can facilitate regular handwashing.

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- **While traveling:**
 - Encourage employees to wash their hands regularly and stay at least 1 m away from people who are coughing or sneezing
 - Ensure employees know what to do and who to contact if they feel ill while traveling.
 - Ensure that your employees comply with instructions from local authorities where they are traveling. If, for example, they are told by local authorities not to go somewhere they should comply with this. Your employees should comply with any local restrictions on travel, movement or large gatherings.
- **When you or your employees return from traveling:**
 - Employees who have returned from an area where COVID-19 is spreading should monitor themselves for symptoms for 14 days and take their temperature twice a day.
 - If they develop even a mild cough or low grade fever (i.e. a temperature above 37°C) they should stay at home and self-isolate. This means avoiding close contact (1 m or nearer) with other people, including family members. They should also telephone their healthcare provider or the local public health department, giving them details of their recent travel and symptoms.

4. Getting your workplace ready in case COVID-19 arrives in your community

- Develop a plan of what to do if someone becomes ill with suspected COVID-19 at one of your workplaces
 - The plan should cover putting the ill person in a room or area where they are isolated from others in the workplace, limiting the number of people who have contact with the sick person and contacting the local health authorities.
 - Consider how to identify persons who may be at risk, and support them, without inviting stigma and discrimination into your workplace. This could include persons who have recently travelled to an area reporting cases, or other personnel who have conditions that put them at higher risk of serious illness (e.g. diabetes, heart and lung disease, older age).
 - Tell your local public health authority you are developing the plan and seek their input.
- SPromote regular teleworking across your organization. If there is an outbreak of COVID-19 in your community, the health authorities may advise people to avoid public transport and crowded places. Teleworking will help your business keep operating while your employees stay safe.
- Develop a contingency and business continuity plan for an outbreak in the communities where your business operates
 - The plan will help prepare your organization for the possibility of an outbreak of COVID-19 in its workplaces or community. It may also be valid for other health emergencies.
 - The plan should address how to keep your business running even if a significant number of employees, contractors and suppliers cannot come to your place of business—either due to local restrictions on travel or because they are ill.
 - Communicate to your employees and contractors about the plan and make sure they are aware of what they need to do – or not do – under the plan. Emphasise key points such as the importance of staying away from work even if they have only mild symptoms or have had to take simple medications (e.g. paracetamol, ibuprofen) which may mask the symptoms.

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- Be sure your plan addresses the mental health and social consequences of a case of COVID-19 in the workplace or in the community and offer information and support.
- For small and medium-sized businesses without in-house staff health and welfare support, develop partnerships and plans with your local health and social service providers in advance of any emergency.
- Your local or national public health authority may be able to offer support and guidance in developing your plan.

Remember:

Now is the time to prepare for COVID-19. Simple precautions and planning can make a big difference. Action now will help protect your employees and your business.

How to stay informed:

Find the latest information from WHO on where COVID-19 is spreading:

<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports/> Advice and guidance from WHO on COVID-19 <https://www.who.int/emergencies/diseases/novel-coronavirus-2019> <https://www.epi-win.com/>

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APPENDIX 4: SUMMARY OF SECTOR SUPPLY CHAINS

Sector	Sub-Sector	Supply Chain Node
Manufacturing	Consumables	Raw Material → Transporter (Loading, In-Transit, Off-loading) → Warehouse/Storage → Retailer/Wholesaler → MANUFACTURER → Package → Transporter → Wholesaler → Retailer → Buyer
	Textile	Cloth Manufacturer → Package → Transporter → Wholesaler → Retailer → Buyer
	INFORMAL	Raw Material → Transporter (Loading, In-Transit, Off-loading) → Warehouse/Storage → Retailer/Wholesaler → Home-based/Market MANUFACTURER → Package → Transporter → Buyer
	Paper and Printing	Raw Material → Transporter (Loading, In-Transit, Off-loading) → Warehouse/Storage → Retailer/Wholesaler → MANUFACTURER → Package → Transporter → Wholesaler → Retailer → Buyer
Retail	Supermarket	MANUFACTURER → Package → Transporter → Wholesaler → Retailer → Buyer
	INFORMAL	
	Clothes	
	Stationery	
Air travel	Airport	Passenger: Home (packing) → Bus/taxi → Check-in → Lounge/Duty Free shopping → Boarding → On-Board → Disembarkation → Immigration → Baggage Claim → Bus/Taxi
	Carrier	Cargo: Owner (packing) → Transport → Inspection → Customs → Loading → Stowing → unloading → inspection → customs → delivery/transport
Banking/Financial	Micro-Finance	N/A
	Mobile Money	Deposit: Client → Teller → Next Client or Bank or Immediate Use Withdrawal: Previous client/Bank/Home Safe → Client → transaction
	Commercial Bank	Inside Bank: Deposits/BOZ Acquisitions → Vault → Teller → Client → Transaction Auxiliary Bank: Deposits/BOZ Acquisitions → Vault → ATM → Client → Transaction
Property Management	Residential	<ul style="list-style-type: none"> Commercial – Staff: Home → Bus/Taxi/own vehicle → Short Walk → Office → Desk/Station Commercial – Client: Home → Bus/Taxi/own vehicle → Short Walk → Office → Waiting room → Meeting room Commercial – Changing tenants (1): Old tenant → Movers/Transport → New Location → Unload → Unpack → Set-up/Decor Commercial – Changing tenants (2): New tenant → signs lease → Movers/Transport → New Location → Unload → Unpack → Set-up/Décor Buyer/Seller → Sellers Vehicle → Viewing property →
	Commercial	
	Land	
Tourism	Hotels and Lodges	From Air Travel: Arrival → baggage → Check-in → Room → Amenities → Check-out → taxi/bus
	National Parks	Home/Hotel/Lodge → Tour Guide/Hired/Own Vehicle → Park gate → picnic/camp site → Exit
	Restaurants	Home/Hotel/Lodge/Office → Bus/Taxi/own vehicle → table → Amenities → Exit

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Sector	Sub-Sector	Supply Chain Node
	Bars	Home/Hotel/Lodge/Office → Bus/Taxi/own vehicle → table/bar → Amenities → Exit
	MICE	Home/Hotel/Lodge/Office → Bus/Taxi/own vehicle → registration → meeting room → amenities → exit
Trucking and Clearing	Collection and Packaging	Hired Truck: Owner of truck → transporter → Client Location → Pack → Load → in-transit → off-load
	In Transit	Owned Truck: Client Location → Pack → Load → in-transit → off-load
	Port of entry/exit	Packing → Loading → Transport → [Airport: off-load from transport →] Inspection → Customs → Loading → Stowing → unloading → inspection → customs → delivery/transport
Agriculture	Crops	Harvest at Farm → Transporter (Loading, In-Transit, Off-loading) → Warehouse/Storage → Retailer/Wholesaler → MANUFACTURER → Package → Transporter → Wholesaler → Retailer → Buyer
	Milk	Milking at Farm → Transporter (Loading, In-Transit, Off-loading) → Warehouse/Storage → Retailer/Wholesaler → Processor → Package → Transporter → Wholesaler → Retailer → Buyer
	Fish	Harvest at Farm → Transporter (Loading, In-Transit, Off-loading) → Warehouse/Storage → Retailer/Wholesaler → Processor → Package → Transporter → Wholesaler → Retailer → Buyer
	Chicken	Dressing → Transporter (Loading, In-Transit, Off-loading) → Warehouse/Storage → Retailer/Wholesaler → Processor → Package → Transporter → Wholesaler → Retailer → Buyer
	Meat	Farm → Transporter (Loading, In-Transit, Off-loading) → Abattoir → Warehouse/Storage → Retailer/Wholesaler → Processor → Package → Transporter → Wholesaler → Retailer → Buyer
Private Medical Care	Clinics and Hospitals	<ul style="list-style-type: none"> Out-patient: Home/Referral → Ambulance/public/private transport → waiting room → exam room → Exit In-Patient: Home/Referral → Ambulance/public/private transport → waiting room → exam room → Admitted → Amenities/services → discharged → Ambulance/public/private transport → Home
Mining	Above Ground	<ul style="list-style-type: none"> Mining Staff: Home → Transport → Changing Room → on-site vehicle → work station → equipment → Loading → Processing → Transporter → Port
	Under Ground	<ul style="list-style-type: none"> Admin Staff: Home → Bus/Taxi/own vehicle → Short Walk → Office → Desk/Station
	Gold, Coal, Copper	<ul style="list-style-type: none"> Service providers: Home → Bus/Taxi/own vehicle → Short Walk → Duty Station
Construction	Road, Building	Home → Transport → Changing Room → on-site vehicle → work station → equipment
Education	All levels	Home/Office → Bus/Taxi/own vehicle → registration → class room → amenities → exit
Informal Sector	Markets	Home → Public transport → orders on-site (usually from wholesalers) → transport → market → display → on-site packaging → buyer
	Bus stations, Buses and Taxis	Passenger/Driver/Conductor → Bus → numerous unpredictable bus stops → walk → destination (via other stops)
	Home Based Businesses	Raw Materials → Processing/production → Packaging → Delivery to client/Client collection → Buyer

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APPENDIX 5: RISK ASSESSMENT TOOL – THINKING ABOUT RISKS ASSOCIATED WITH COVID-19

Company name:

Assessment carried out by:

Date of next review:

Date assessment was carried out:

What are the hazards?	Who might be harmed and how?	What are you already doing to control the risks?	What further action do you need to take to control the risks?	Who needs to carry out the action?	When is the action needed by?	Done

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APPENDIX M1: CHECKLIST FOR AGRICULTURE SECTOR

The COVID-19 threat has imposed a new way of carrying out business operations (New Normal). This may be a permanent normal for a long time to come. In figuring out supply chain solutions, responsible supervisors of operations will have to expand upon existing safety protocols and change their Occupational Safety by deploying plans to protect the customers, clients, patrons, employees and indeed all supply chain players and the general public while the provisions of Zambian regulatory laws will still apply. The checklist below could be used by other sectors in a customised way to suit their operations.

MANAGEMENT	HOURLY	DAILY	WEEKLY	AS NEEDED	PROCESS OWNERSHIP	COLLABORATIONS/PARTNERS
1. Attendance Guidelines a) Temperature checks b) Self-check procedures c) Oversight and management of symptoms among staff		✓			Supervisors/Safety Managers collect data on employee illness, tracing activity and report to HR, HR Staff follow up with affected employees and families	Company Manger, HR use internal communication Daily, weekly and weekly employee data is aggregated by HR and internal communication done to provide updates to all staff
2. Premises/Business/Company Response in an event of confirmed case of COVID-19 a) Report to public health team/authorities b) Quarantining and contact tracing procedure c) Stagger the shifts d) Communicate to the public through media about the cases				✓	General Manger/CEO, Top Management Team	HR and Internal Communication
3. Staff and Client personal Hygiene a) Regular handwashing b) Hand sanitisation: How, when, and where c) Hand sanitiser areas/stations d) Reporting, entering premises, during and on leaving work premises	✓				Human Resource and Safety Managers, Supervisors	All employees All patrons, customers
4. Handwashing a) After using the restroom b) Before and after eating, and taking breaks c) After blowing their nose, coughing, or sneezing or touching their faces	✓				Human Resource and Safety Managers, Supervisors	All employees All patrons, customers

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d) After touching an animal, animal feed, or animal waste						
e) After contacting high-touch surfaces or shared equipment						
f) Before putting on gloves						
5. Sourcing, Distribution, receiving materials for use as Personal Protective Equipment (PPEs) guidelines		✓			Purchasing and Safety Managers	Internal communication
6. PPE supply: Face Masks, Gloves, Shields,			✓		Safety managers HR Manager Operations Mangers	All employees
a) Check condition and fit for use of PPEs						
b) Care and cleaning						
7. Enforcing Social and physical Distancing Measures		✓			Supervisors and HR Managers	HR Manger or assigned employees
a) Workplaces						
b) During meals						
c) Check-ins and check-outs						
d) Registration and reception areas						
e) Waiting rooms						
f) Seats and sitting arrangements						
g) At dining tables						
h) Counters and tills						
i) Queuing						
j) Place drop-boxes or drop-off locations near the road so vehicles do not need to enter the farm						
k) Hold meetings and trainings in small groups						
8. Cleaning and Disinfecting		✓			Safety Managers and HR, House keeping	Internal communication
a) Waste bins availability						
b) Waste handling and removal and disposal						
c) During shifts changes						
d) Door handles and knobs, rails and work stations						
e) Desk work areas. Computer keyboards/ digital buttons and switches						

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f) Paper work handling, copiers faxes, (office machines)						
g) Workshop tools						
h) Trolleys and shopping baskets						
i) Common use telephone						
j) Tills, elevators, rails						
k) Kitchens						
9. Handling Deliveries/Supplies		✓			Purchasing Managers	HR and assigned employee
a) Trucks						
b) Small packages/parcels (courier services) mails, food services						
10. Signage and Markings		✓			General managers/supervisors	Internal communication
a) Apply to visitors and delivery staff						
b) For staff on spacing floor marks						
c) Digital information on COVID-19 awareness						
d) Strategic information posters for public						
11. Emergency Phone Number		✓			Safety Managers and HR	All employees
a) Family members						
b) First response						
c) Premises Reaction Health team phones						
d) COVID-19 MoH Hotlines						
12. Management Team Communication with			✓		General managers, CEOs with HR and Communication Dept. or Public Relations	General Manager
a) Staff						
b) Suppliers						
c) Distributors						
d) Customer/clients/visitors						
e) Community representatives/public Health Team on COVID-19 from MoH						
13. Remote Work Staff Policies or Staff Working from Home		✓			HR Managers	CEOs, General Managers

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APPENDIX M2: DAILY COVID-19 SEASONAL AGRICULTURAL WORKER WELLNESS CHECK

Farm Name and address:.....

Instructions:

1. Ask the worker daily if they are experiencing any of these symptoms: fever, cough, shortness of breath, muscle aches, fatigue, headache, sore throat, runny nose, sneezing, nasal congestion, hoarse voice, difficulty swallowing.
2. If NO, place a ✓check in the box.
3. If YES, isolate the worker and contact the health unit COVID-19 hotline at +260 97 4493553 and +260 96 4638726. Let them know you are calling regarding a seasonal agricultural worker with symptoms. Please provide your name and phone number, the employer/farm name and the worker's name. If it is a life-threatening emergency call 909. Place an X in the box and record any symptoms in the notes section.
4. Note: Day one of isolation starts the day after arrival.
5. Once a worker has completed their 14 days of isolation, please submit the completed chart to the Ministry of Health

Name of worker	Isolation address	Arrival date (Day 0)	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Notes (for symptoms)
John Phiri	Plot 123, Matero East	11/08/2020	✓	✓	✓	✓	✗										Fever, cough

External References

World Health Organisation, WHO COVID-19 and Food Safety: Guidance for Business

<https://hnhu.org/wp-content/uploads/Guidance-Documents/COVID-19-Seasonal-Worker-Wellness-Check-2020-04-14.pdf>

