



CHLORATE MRLs COMPLIANCE BEST PRACTICE FOR PROCESSED FOODS: MULTICOMPONENT FOODS

Background

Section 21 of the Food Safety Act 1990 provides for the defence of due diligence whereby it shall “*be a defence for the person charged to prove that he took all reasonable precautions and exercised all due diligence to avoid the commission of the offence by himself or by a person under his control.*”

It is extremely important that a proactive systems-based approach to due diligence is taken to assure chlorate only arises in processed food and feed from legitimate sources, i.e. from appropriate HACCP-driven use of food, feed and water hygiene biocides, and not as phytopharmaceuticals/Plant Protection Products.

The HSE has advised that ‘*companies should issue a statement confirming that, with respect to the practical interpretation of the Regulation [2020/749] in the UK, goods identified as processed foods may legitimately exceed statutory MRLs set for unprocessed foods (with no enforcement or restriction on sale/supply arising), with the following provisos*’:

- That **these special rules will only apply where businesses provide proof that there have been legitimate chlorate trace inputs at the processing stage, such as through the use of potable water or other sources in processed food production, or through legitimate disinfection practices to maintain hygiene.**
- That each food business generates a **full description of its production practices** to serve as proof that these are legitimate additional inputs leading to the MRL being exceeded.
- Where exceedance results solely from a concentration of the residue through actions such as drying, and not because of additional chlorate inputs at the processing stage. In those cases, information on the process and calculated processing factors should be generated.
- It is also expected that the above arrangements will run alongside continuing industry efforts to minimise uses and traces arising from those uses, provided standards of food hygiene remain high.
- Any steps taken to comply with the MRLs Regulation should not undermine appropriate food hygiene panels.

FBIG suggests that FBOs should prepare such a statement where there is any likelihood of an MRL exceedance so that they can provide this statement to CRD should it be requested in the event of an exceedance arising.

Note:

Chlorate arises in food and drink primarily from the use of hygiene biocides by water companies to assure the safety of mains water. It is the responsibility of water companies to supply water of appropriate quality to their customers from all their water treatment works. The revised EU Drinking Water Directive (DWD) was agreed in summer 2020, setting a limit of 0.25mg/l for chlorate in drinking water, with flexibility up to 0.7mg/l. The DWD is due to come into force in October 2020 with two years for transposition. As the Transition Period will end before the transposition deadline the UK will have freedom to amend legislation. Defra has confirmed to CFA that the UK Government has been clear that about not weakening the UK’s environmental standards and so it would still consider the effect of the changes made to the DWD. However, due to COVID-19 these considerations have been paused and so no decisions on implementation have yet been made.

PARTICULAR CONSIDERATIONS FOR MULTICOMPONENT FOODS

[Chilled] multicomponent foods are assembled from components of known origin, produced by suppliers meeting not only legal but also specified technical standards.

There is a clear chain of custody from grower/primary producer to component processor to final UK chilled product manufacturer, with each step subject to assurance schemes focusing on legal compliance and Supplier Quality Assurance, with the additional application of retailer customers' specific supplementary requirements, industry guidance and standards, and risk assessment.

Such requirements include:

- Food (and feed) placed on the market must be safe, with any necessary usage instructions being provided (e.g. storage, preparation)
- Food must be produced, stored and handled hygienically
- Food, feed and water must be compliant with MRLs
- Food, feed and water must comply with food safety legislation, e.g. use of potable water, use of hygiene biocides
- Food and feed must be traceable (one up, one down as a minimum)

These elements apply to each component, as appropriate.

Pointers for FBO Statement on Multicomponent Food Production

1. Describe the product and processes

For each component of a chilled multicomponent food set out:

- i) **Stages of production where chlorate traces may arise from the use of hygiene biocides to assure safety and hygiene**, e.g. crops and potable water, produce washing using chlorinated water, feed incorporating potable water, injection- or immersion-cured meats and potable water used for curing solutions, direct addition of water as an ingredient (e.g. dressings, marinades, sauces), meat, fish and dairy products (animal feed, potable water), hygiene management of food and feed contact equipment (e.g. conveyors, slicers).

See FBIG guidance (www.chilledfood.org/FBIG) on compliance due diligence for the production of example components, e.g. primary production chlorate MRL compliance due diligence, and its May 2020 submission to HSE on compliance.

- ii) **Stages of production where chlorate traces may become concentrated, e.g. dried components.** HSE has stated that can be accommodated in enforcement of 2020/749 if information on the process and calculated processing factors are generated.

You could consider presenting the information in i) and ii) in a flow diagram if you feel this is appropriate. See example sandwich components and assembly diagrams (Appendix 1).

- iii) If you do carry out **monitoring** of chlorate traces/residues at any stage of production you may wish to refer to this in your statement. Dependent on the issue it may be relevant to refer to earlier PRiF quarterly data: <https://www.gov.uk/government/collections/pesticide-residues-in-food-results-of-monitoring-programme#quarterly-reports>

2. Describe what mitigation measures are in place to assure food hygiene and safety whilst minimising chlorate traces from legitimate sources.

Refer to any industry guidance which you follow, for example:

- FBIG (2016), **Biocides in Cleaning & Disinfection**. <https://www.chilledfood.org/wp-content/uploads/2018/08/Biocides-Cleaning-and-Disinfection-working-document-industry-guidance-18-10-16-with-updated-best-practice-example-FBIG-logo-in-progress.pdf>
- GFSI (2019). **Chemicals in Food Hygiene. Volume 1: The optimal usage of cleaning agents, sanitisers and disinfectants to minimise the risk of traces in foods**. <https://mygfsi.com/wp-content/uploads/2019/09/Chemicals-in-Food-Hygiene-Volume-1.pdf>.
- CFA (2010). **Protocol for produce washing**. <https://www.chilledfood.org/wp-content/uploads/2015/09/CFA-56-10-Produce-Wash-Protocol-revised-11-5-10-final.pdf>
- CFA (2010). **Produce Decontamination Assessment Protocol: Part 2 – Washing Validation**. <https://www.chilledfood.org/wp-content/uploads/2016/11/CFA-55-10-Produce-decontamination-assessment-protocol-part-2-washwater-validation-revised-11-5-10-final.pdf>
- FPC (2013). **Guidance for food business operators on the hygienic sourcing, production and safe handling of ready to eat sprouts**. Second Edition. <https://www.freshproduce.org.uk>

3. Refer to any appropriate food safety accreditations which you and your suppliers currently hold in relation to production, demonstrating that phytopharmaceutical/PPP compliance is subject to external scrutiny (e.g. BRCGS v8, retailers' specific commercial requirements/protocols, Red Tractor, Global GAP).

See Appendix 2 for example schemes in relation to animal feed and farming.

Chicken Salad Sandwich

This is an example of one of the ~15,000 SKUs of chilled prepared foods on the market every day in the UK. Chilled prepared foods are characterised by primarily being multicomponent and relying on scrupulous hygiene from farm (ingredients) to intermediate processor (e.g. mayonnaise producer, cooked chicken producer) to final assembler. Some chilled prepared foods can contain as many as 30 ingredients.

This is a Processed food, Footnote A applies.

Chlorates are not used as phytopharmaceuticals/PPPs. Good Agricultural Practice (GAP) and animal husbandry compliance is part of FBOs' Food Safety Management Systems to assure chlorate is not used as a PPP.

Sources of chlorate traces in components and the final assembled product are:

- Water – an ingredient in components, disinfectant and sanitiser solvent
- Food contact surface disinfectants and sanitisers
- Animal feed and drink – from water as a component, contact surface disinfectants and sanitisers

The manufacture of each of the components, and the final assembly contributes to the final level of chlorate traces present:

- Bread
- Butter (or margarine)
- Produce, e.g. vegetables, herbs
- Cooked chicken

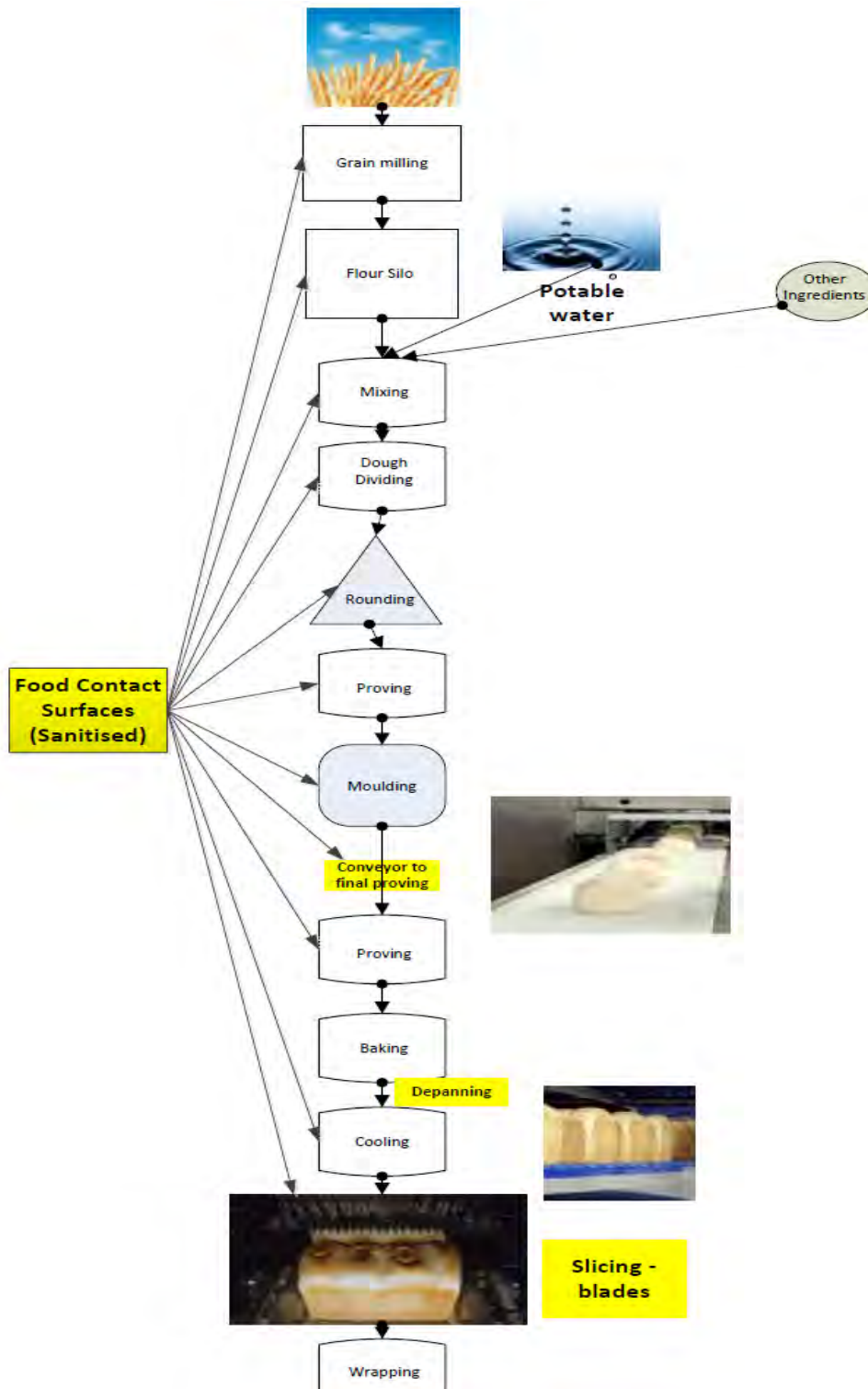
Taking each in turn:

Bread Manufacture:

Chlorates are not used as phytopharmaceuticals/PPPs. Good Agricultural Practice (GAP) compliance is part of FBOs' Food Safety Management Systems to assure chlorate is not used as a PPP.

Sources of chlorate traces are:

- Water in crop irrigation, as an ingredient, disinfectant and sanitiser solvent
- Food contact surface disinfectants and sanitisers

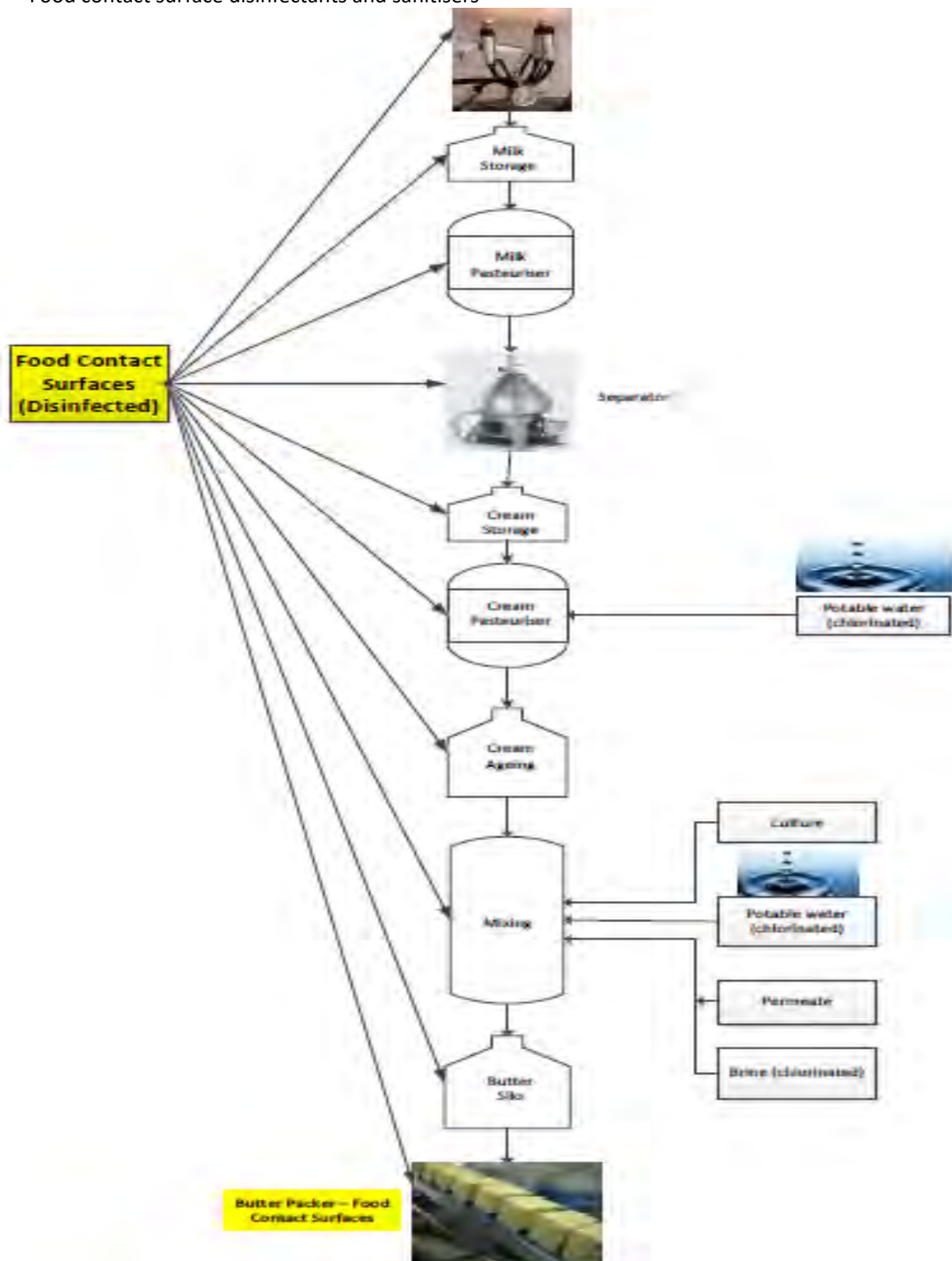


Butter Manufacture:

Chlorates are not used as phytopharmaceuticals/PPPs. FBOs' Food Safety Management Systems assure chlorate is not used as a PPP.

Sources of chlorate traces are:

- Animal feed and drink – from water as a component, contact surface disinfectants and sanitisers
- Water as an ingredient in components, disinfectant and sanitiser solvent
- Food contact surface disinfectants and sanitisers

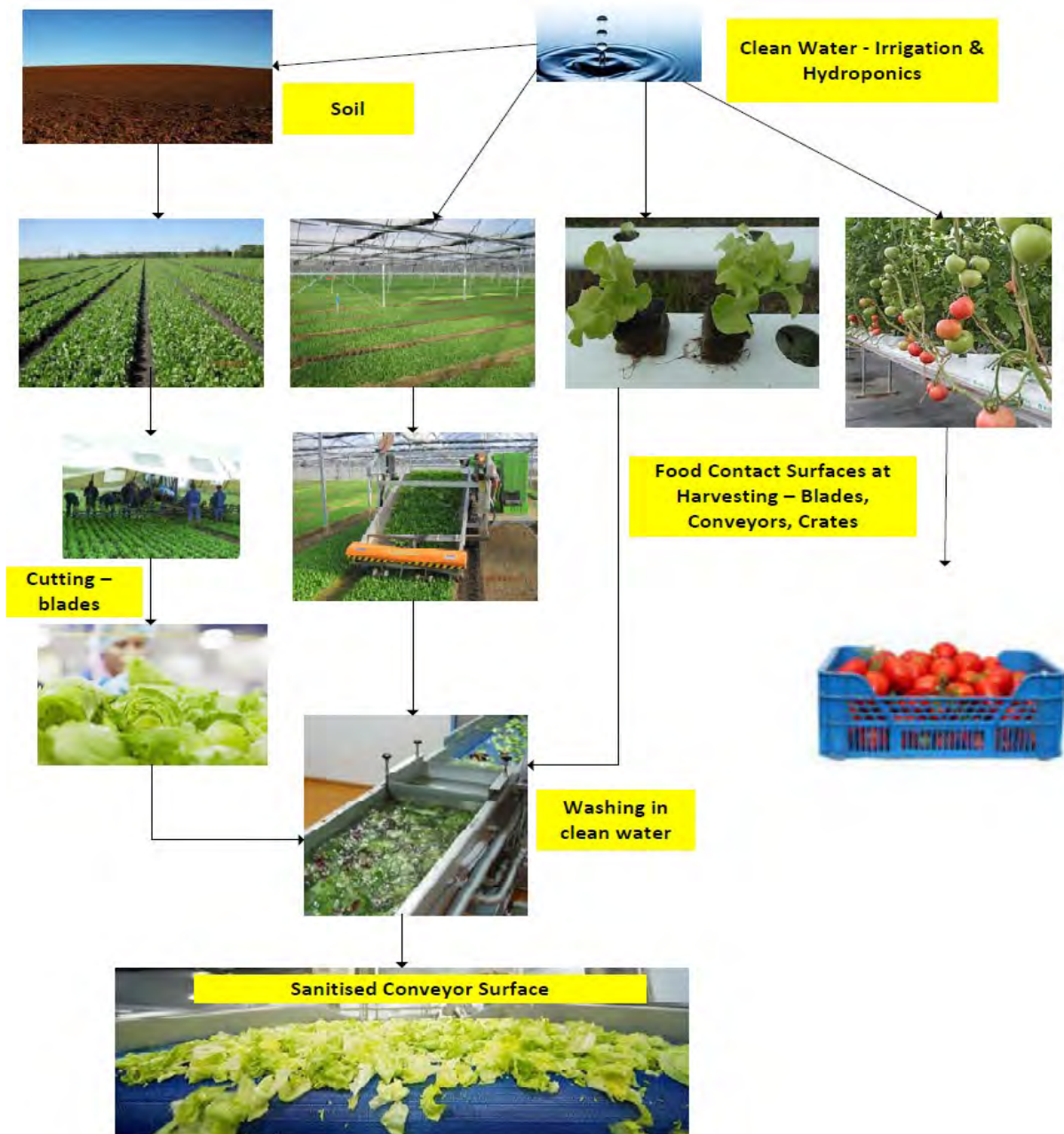


Fresh produce components:

Chlorates are not used as phytopharmaceuticals/PPPs. Good Agricultural Practice (GAP) compliance is part of FBOs' Food Safety Management Systems to assure chlorate is not used as a PPP.

Sources of chlorate traces in components and the final product are:

- Water for irrigation (and hydroponics), flumes, washwater, as a disinfectant and sanitiser solvent
- Food contact surface disinfectants and sanitisers

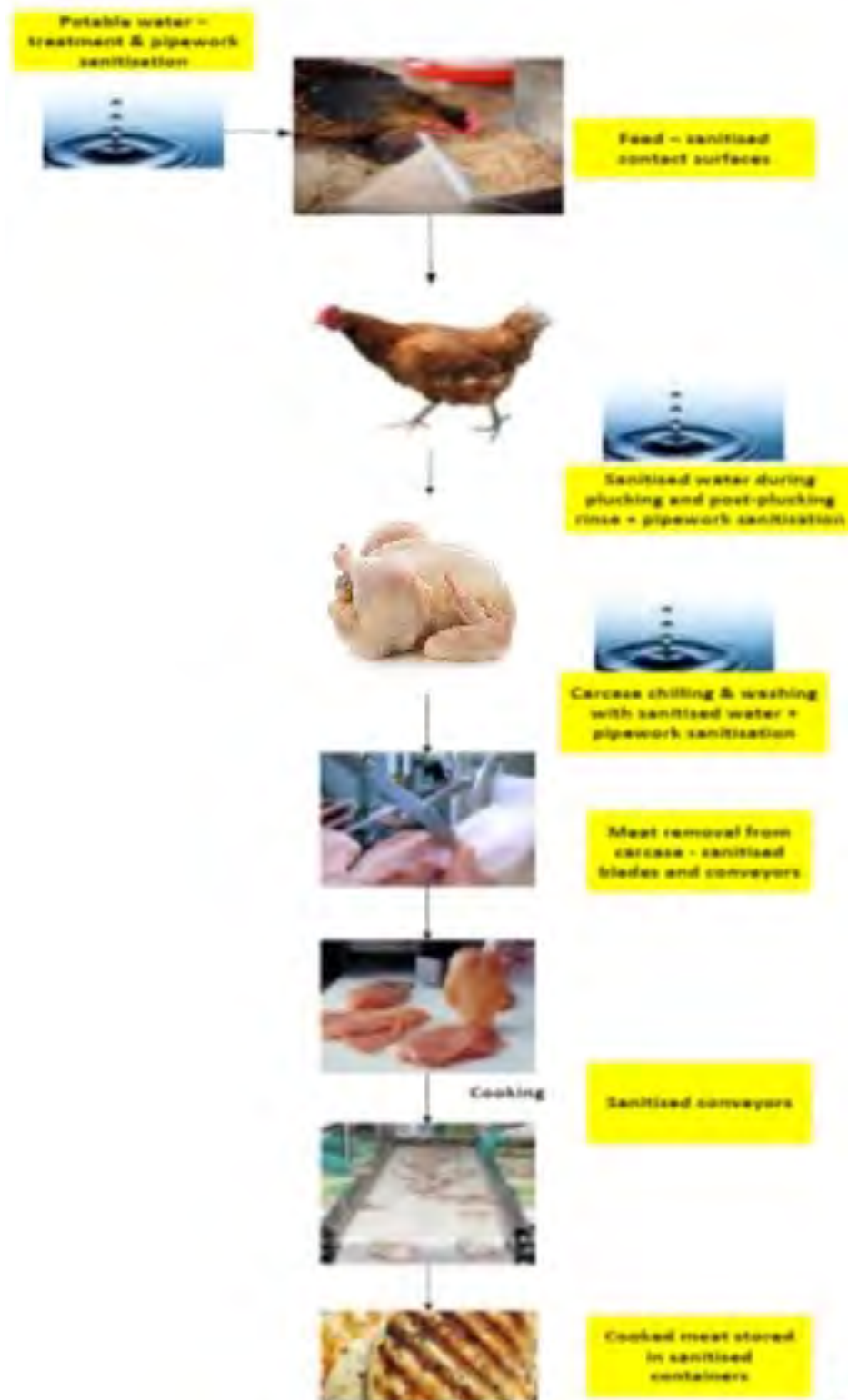


Chicken:

Chlorates are not used as phytopharmaceuticals/PPPs. Good Agricultural Practice (GAP) and animal husbandry compliance is part of FBOs' Food Safety Management Systems to assure chlorate is not used as a PPP.

Sources of chlorate traces are:

- Animal feed and drink – from water as a component, contact surface disinfectants and sanitisers
- Water – an ingredient in components, disinfectant and sanitiser solvent
- Food contact surface disinfectants and sanitisers

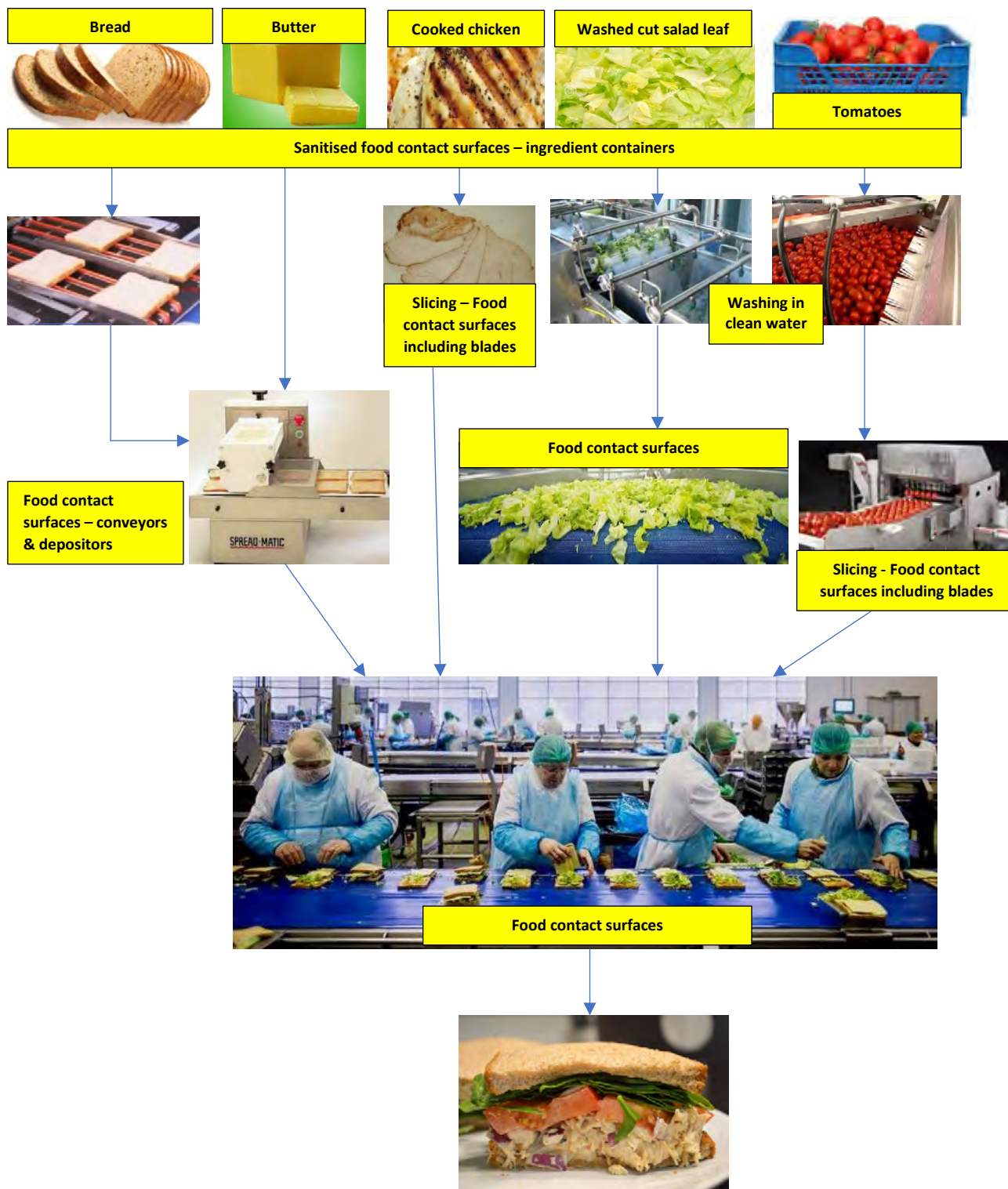


Sandwich Assembly:

Chlorates are not used as phytopharmaceuticals/PPPs. Good Agricultural Practice (GAP) and animal husbandry compliance is part of FBOs' Food Safety Management Systems to assure chlorate is not used as a PPP.

Sources of chlorate traces in components and the final assembled product are:

- Animal feed and drink – from water as a component, contact surface disinfectants and sanitisers
- Water for irrigation (and hydroponics), flumes, as an ingredient in components, as a disinfectant and sanitiser solvent
- Food contact surface disinfectants and sanitisers



Example Animal Feed, Farm and Manufacturer Assurance Schemes

Abbreviated Scheme Name	Full Scheme Name	Scope of the Scheme
BRCGS	BRC Global Standards - Food	Food production post farm gate
UFAS (AIC)	Universal Feed Assurance Scheme	Assured compound feeds, complementary feeds, licks, pre-mixtures and feed ingredients/ materials
FEMAS (AIC)	Feed Materials Assurance Scheme	Production of and trade in feed ingredients/ feed materials
TASCC (AIC)	Trade Assurance Scheme for Combinable Crops	Whole combinable crops farm assurance, storage and transport.
COCERAL GTP	European trade body for Agro supply and	Trade in feed ingredients/feed materials
GMP+ (PDV)	Dutch Product Board for Animal Feed	Assured compound feeds, complementary feeds, licks, pre-mixtures and feed ingredients/ materials
FAMI-QS	European Feed Additives and Pre-mixtures Quality System	Feed additives and pre-mixtures
BFBi scheme	Brewing, Food & Beverage Industry Suppliers Association	Certifies meal from smaller breweries
RTAOS	Red Tractor Assurance Cold Crush Oilseeds Scheme	Certifies meal from cold crush oilseeds
RTA Combinable Crops and Sugar Beet	Red Tractor Assurance for Farms - Combinable Crops and Sugar Beet Scheme	Combinable crops & sugar beet
SQC	Scottish Quality Farm Assured Combinable Crops Ltd	Combinable crops
NIFQACS	Northern Ireland Farm Quality Assured Cereals Scheme	Combinable crops
SAFA	Soil Association Farm Assurance (Crops module)	Combinable crops
RTA Fresh Produce	Red Tractor Assurance for Farms - Fresh Produce Scheme	Produce – vegetables, fruits and root crops
RTA chickens – indoor enhanced welfare	Red Tractor Assurance for Farms – Chicken Standards: Indoor Enhanced Welfare	Chickens
RTA Chicken Standards - Breeder Layers	Red Tractor for Farms - Chicken Standards: Breeder Layers	Breeder layer chickens
RTA Dairy Standards	Red Tractor for Farms – Dairy Standards	Dairy cattle husbandry, milk production
Lion Eggs	Lion Eggs	Code of practice that ensures eggs have been produced to the highest standards of food safety
QMS	Quality Meat Scotland	Offers consumers legal guarantee that meat has come from animals that have spent their whole lives being raised to very strict standards
FAWL	Farm Assured Welsh Livestock	Strengthens consumer confidence by providing assurance of farm standards in Wales

NIFQAS	Northern Ireland Farm Quality Assurance Scheme	provides high standards for farmed meat in Northern Ireland
SQC	Scottish Quality Cereals	Crop food safety certification that ensures high standards of farm management and operations
Global GAP IFA	Global GAP Integrated Farm Assurance	Fresh produce production
Global GAP Harmonized Produce Safety Standard	Global GAP Harmonized Produce Safety Standard	Fresh produce production – food safety-only focus
GLOBALG.A.P. Crops for Processing	GLOBALG.A.P. Crops for Processing	Covers crops that are slated to be frozen, juiced, used to make pre-cooked meals, and used for animal feed, among other types of processing.
GLOBALG.A.P. Produce Safety Assurance Standard	GLOBALG.A.P. Produce Safety Assurance Standard	Fresh produce GAP
GRMS	Global Red Meat Standard	
Organic Farmers & Growers CIC	Approved organic certification body	
Organic Food Federation	Approved organic certification body	
Soil Association Certification Ltd	Approved organic certification body	
Irish Organic Association	Approved organic certification body	
Organic Trust CLG	Approved organic certification body	
Quality Welsh Food Certification Ltd	Approved organic certification body	
OF&G (Scotland) Ltd	Approved organic certification body	
SQF	Safe Quality Food	
Abbreviated Scheme Name	Full Scheme Name	Scope of the Scheme
UFAS (AIC)	Universal Feed Assurance Scheme	Assured compound feeds, complementary feeds, licks, pre-mixtures and feed ingredients/ materials
FEMAS (AIC)	Feed Materials Assurance Scheme	Production of and trade in feed ingredients/ feed materials
TASCC (AIC)	Trade Assurance Scheme for Combinable Crops	Whole combinable crops farm assurance, storage and transport.
COCERAL GTP	European trade body for Agro supply and	Trade in feed ingredients/feed materials
GMP+ (PDV)	Dutch Product Board for Animal Feed	Assured compound feeds, complementary feeds, licks, pre-mixtures and feed

		ingredients/ materials
FAMI-QS	European Feed Additives and Pre-mixtures Quality System	Feed additives and pre-mixtures
BFBi scheme	Brewing, Food & Beverage Industry Suppliers Association	Certifies meal from smaller breweries
RTAOS	Red Tractor Assurance Cold Crush Oilseeds Scheme	Certifies meal from cold crush oilseeds