Fresh Produce Standards

Red Tractor Fresh Produce v5.1 – Leafy Salads

Our standards are organised in sections. All the words against each standard, including the column ‘How you will be assessed’, form part of it. Standard coding begins with a two-letter prefix which identifies the section (e.g. LS for Leafy Salads).

- Look out for the guidance boxes – these offer useful tips to help you meet the relevant standard.
- Recommendation: This is not a standard and a non-conformance raised will not affect your certification. However, these are recommended actions to undertake to help demonstrate working to Red Tractor and industry core principles
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Indicates that a record is required and suggests potential documentary evidence which could be used to demonstrate compliance

MANURE	HOW YOU WILL BE MEASURED	RECORDS
LS.1 **It is recommended that if raw or inadequately treated manure has been applied, at least 24 months must elapse before drilling / planting of crop** **(Please note 12 months interval applies as a minimum, as referenced in the Safe Applications to Land matrix)** **(Recommendation)**		R • *Manure application records*
GUIDANCE: This may also encompass amendments which contain raw manure and are not adequately treated - e.g. to a PAS 100 certified process. This may include Johnson-Su extract, "compost tea", biostimulants, worm castings, etc.		
LS.2 **Suppliers of industrially processed manures / soil amendments must demonstrate product is free from pathogens prior to application.**	**LS.2.a** The product undergoes a validated heat treatment process (e.g. 2 minutes at 70°C), which must be documented and known to the grower. **LS.2.b** A certificate of conformance has been supplied for each batch **LS.2.c** Microbiological testing must be carried out on each batch, either by the grower or the supplier, demonstrating that the batch meets the following criteria:	R • Documented treatment process • Certificate of conformance • Microbiological testing certificate

<table>
<tr><td></td><td><table><tr><td>Target Organism</td><td>Acceptance Criteria</td></tr><tr><td>E. coli</td><td>< 100 cfu/g</td></tr><tr><td>Salmonella spp</td><td>absence or < LoD</td></tr></table></td><td></td></tr>
<tr><td colspan="3">GUIDANCE: A "batch" is defined as: "A group or set of identifiable products obtained from a given process under practically identical circumstances and produced in a given place within one defined production period."</td></tr>
<tr><td>LS.3
Where on-farm composting of manures takes place, a defined procedure is in place and records are kept.</td><td>LS.3.a
Records must include:
Source of raw materials
Temperatures
Dates of turning
LS.3.b
Internal heap temperature is monitored and must achieve a minimum of 55°C for at least 3 consecutive days after each turning

LS.3.c
Microbiological testing must be carried out on each batch, demonstrating that the batch meets the following criteria:<table><tr><td>Target organism</td><td>Acceptance Criteria</td></tr><tr><td>E.Coli</td><td>< 100 cfu/g</td></tr><tr><td>Salmonella spp</td><td>absence or < LoD</td></tr></table>LS.3.d
Non-conforming product must be either re-composted to ensure further</td><td>  Composting procedure
Composting records
Microbiological testing certificate</td></tr>
</table>

	pathogen reduction and re-tested, or managed as raw manure in accordance with the Safe Applications to Land Matrix	
FIELD	**HOW YOU WILL BE MEASURED**	**RECORDS**
LS.4 **Site / Field Risk Assessments (RA.6) must consider the following possible contamination risks, where relevant. Preventative actions or mitigation steps are documented where necessary.** **Note: that this list is not exhaustive, and other site-specific risks may also be present and need consideration.**	**LS.4.a** The possibility of contamination from access by animals (domestic or wild) to the production site, including with humans on rights of way **LS.4.b** The possibility of contamination from grazing of previous crops, with a minimum interval of 12 months between grazing and drilling / planting of crop. **LS.4.c** The possibility of contamination from manure storage, spreading and composting operations close to production sites **LS.4.d** The possibility of airborne microbial contamination from nearby animal production / grazing, e.g. in aerosols from slurry spreading and dust from intensive livestock units, both of which may contain pathogens harmful to human health Note: Recommendation is >1 mile distance from cropping area **LS.4.e** The possibility of microbial contamination from organic wastes applied to nearby land, e.g. waste/digestate from anaerobic digesters and sewage sludge/biosolids	 • Site risk assessments

	LS.4.f The possibility of contamination from runoff of contaminated water from nearby land, roads and on-site tracks **LS.4.g** The possibility of contamination from historic flooding (within the past 2 years) Note: "flooding" does not include waterlogging from excessive rainfall or irrigation water if it is not reasonably likely to contaminate crop **LS.4.h** The possibility of the production site being flooded with water that may be contaminated, e.g. where rivers and streams contain upstream discharges from sewage works, septic tanks etc. or where there are livestock in the catchment **LS.4.i** The possibility of contamination from human habitation close to production sites, e.g. discharges from drains or access by domestic animals **LS.4.j** The possibility of contamination from public sewers and foul drains, both on-site and off-site nearby **LS.4.k** The possibility of contamination from sewage treatment facilities, both public and private, close to or on production sites (both currently and in the past) e.g. STWs, septic tanks, package treatment plants and cess pits	

	LS.4.l The possibility of contamination from hazardous waste sites close to fields / production sites (both currently and in the past) **LS.4.m** The possibility of contamination from industrial and mining sites close to fields / production sites (both currently and in the past)	
GUIDANCE: What constitutes "nearby" or "close" will vary depending on multiple factors. The emphasis of these requirements is that the grower has considered the potential risks listed and assessed field suitability or mitigations required.		
LS.5 **Personnel completing Field / Site Risk Assessments are demonstrably competent and have adequate knowledge of the business.**		
LS.6 **Records must be kept and harvest must not take place where there is evidence that surface water (run-off from surrounding land or flooding from watercourses) has entered the crop (Including watercress beds)** **Note: "flooding" does not include waterlogging from**		R • Incident records and remedial actions

excessive rainfall or irrigation water if it is not reasonably likely to contaminate crop		
LS.7 ***It is recommended that an "adverse weather" risk assessment is in place to address particular risks that may arise from flooding, high winds, extreme temperatures, or other weather events that may impact food safety*** ***(Recommendation)***		
GUIDANCE: Chilled Food Association - adverse weather event protocol guidance (2023): *chilledfoodassociation.myshopify.com/products/cfa-adverse-weather-protocol-guidance-rte-fresh-produce*		
Where to find help: Guidance for Industry: Evaluating the Safety of Flood-affected Food Crops for Human Consumption. FDA (2011) https://www.fda.gov/regulatory-information/search-fda-guidance-documents/guidance-industry-evaluating-safety-flood-affected-food-crops-human-consumption#eval Food Safety Begins on the Farm: A Grower Self-Assessment of Food Safety Risks: Cornell University, Cornell University: https://ecommons.cornell.edu/bitstream/1813/2209/1/FSBF_Bk_Eng.pdf Guide to Protecting and Defending Food and Drink from Deliberate Attack: PAS 96:2017. BSI, Defra, FSA. https://www.food.gov.uk/sites/default/files/media/document/pas962017_0.pdf		
WATER	**HOW YOU WILL BE MEASURED**	**RECORDS**

LS.8 **A Water Risk Assessment must be carried out for each irrigation water source, which must consider the following contamination risks, where relevant. Preventative actions or mitigation steps are documented where necessary.** **Note: that this list is not exhaustive, and other site-specific risks may also be present and need consideration.**	**LS.8.a** The possibility of contamination from access of animals (domestic or wild) to water sources used for irrigation / watercress production and associated operations **LS.8.b** The possibility of manure storage, spreading and composting operations close to contamination from water sources **LS.8.c** The possibility of microbial contamination from organic wastes applied to nearby land, e.g. waste/digestate from anaerobic digesters and sewage sludge/biosolids **LS.8.d** The possibility or runoff of contaminated water from nearby land, roads and on-site tracks **LS.8.e** The possibility of contamination from human habitation close to production sites, e.g. discharges from drains or access by domestic animals **LS.8.f** The possibility of contamination from public sewers and foul drains, both on-site and off-site nearby	 • Irrigation water risk assessment
Where to find help: Food Standards Scotland irrigation water assessment template https://www.foodstandards.gov.scot/business-guidance/running-a-food-business/tools-and-training/fresh-produce-tool/irrigation-water-assessment		

LS.9 **Where there is a risk of leakage from foul drains contaminating the crop or irrigation water sources, drains under the grower's control must be tested annually for leaks, and immediately if a leak is suspected.**		 • Testing records
LS.10 **Irrigation equipment and pipework is serviced / maintained at least annually pre-season. This must include blowing out of pipework prior to storage to avoid standing water, and flushing through pre-season.**		
LS.11 ***It is recommended that where irrigation water is tested at least monthly, results are trended*** ***Note: As defined in the water matrix appendix, for irrigation water in direct contact with the edible portion of the crop, E. coli***		 • Irrigation water test result trend

must be within the acceptable limit of 100 CFU/100ml ***Where water does not come into direct contact with the edible portion of the crop, e.g. via drip irrigation, the acceptable limit of E. coli is 1000 CFU/100ml. (Recommendation)***		
HYGIENE	**HOW YOU WILL BE MEASURED**	**RECORDS**
LS.12 **Faecal cross contamination risks from staff / vehicles / equipment must be considered in the risk assessment and mitigated**		 • Risk assessment
LS.13 ***It is recommended that swabbing is used to verify the effectiveness of cleaning (Recommendation)***		 • Swabbing results
HARVEST	**HOW YOU WILL BE MEASURED**	**RECORDS**
LS.14 **A documented pre-harvest risk assessment is carried out no more than 7 days prior to the planned harvest date.**		 • Pre-harvest risk assessment /

Note: This may be linked to the initial site risk assessment, and may be recorded on the same document		site risk assessment
LS.15 **A follow-up harvest inspection is conducted on the day of harvest to ensure no significant changes have occurred which may impact food safety.** **This may be carried out as part of the start-up check as defined in HS.12.**		R • Inspection records / daily start-up checks
POST - HARVEST	**HOW YOU WILL BE MEASURED**	**RECORDS**
LS.16 **Product is protected from contamination by dripping condensate and defrost water from evaporator type cooling systems (e.g. vacuum cooling, cold rooms)** **Note: Examples of effective management may include covering product or avoiding placing pallets in high-risk areas**		